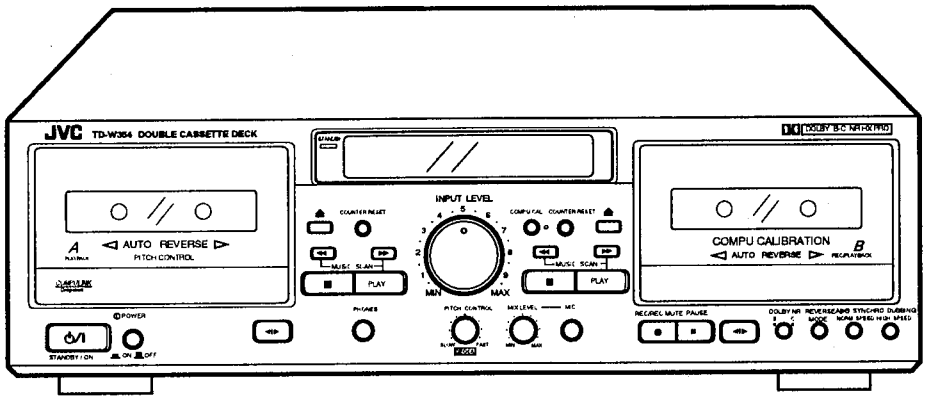
# JVC

# SERVICE MANUAL

## DOUBLE CASSETTE DECK

# TD-W354BK B/C/E/EN/G/J/U/UT




COMPU LINK Component

| Area Suffix | |
|---|---|
| B | U.K. |
| C | Canada |
| E | Continental europe |
| EN | North Europe |
| G | Germany |
| J | U.S.A. |
| U | Other Areas |
| UT | Taiwan |

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No. 4362
February 1997

# ■ Safety Precautios

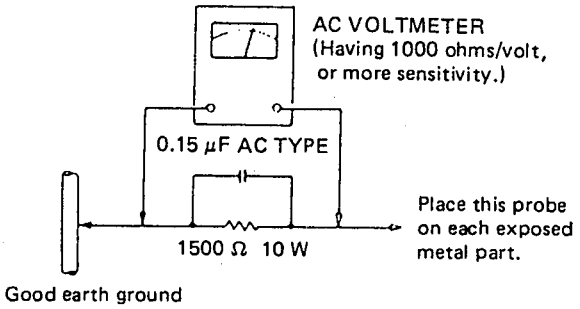
1. The design this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacture's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety — related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of service manual. Electrical components having such features are identified by shading and( ⚠ )on the schematic diagram and by ( ⚠ ) on the parts list in the service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps , tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.
5. Leakage current check (Electrical shock hazard testing)

   After re — assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.

   • Plug the AC line cord directly into the AC outlet. using a"Leakage current tester", measure the leakage current from each exposed metal part of the cabinet, particulary any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exposeed 0.5mA AC(r.m.s.)

   • Alternate check method

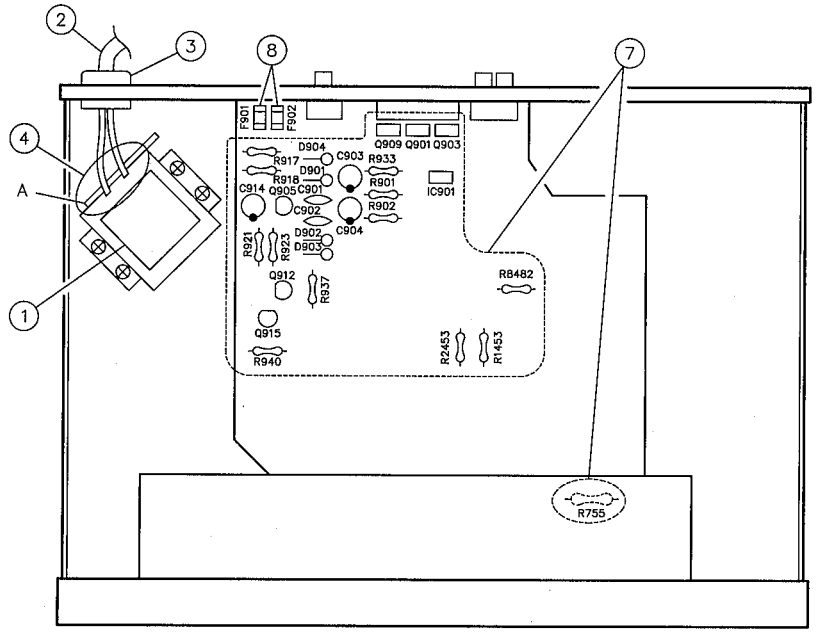
   Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 ohms 10W resistor paralleled by a 0.15 $\mu$ F AC type capacitor between an exposed metal part and a known good earth ground. Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC(r.m.s.).This corresponds to 0.5mA AC(r.m.s.).

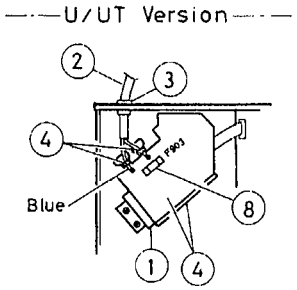


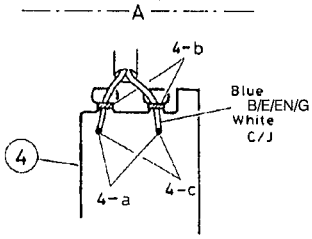

# ◆ Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintaintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

## ◆ Important Management Points Regading Safety
(Items Demanding Special Safety Precautions)

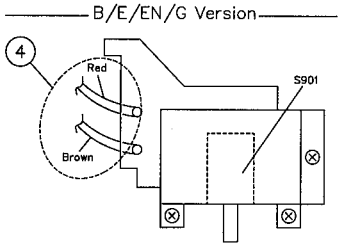



1.Securely fix the power transformer while confirming its marking specified in the following.

| Suffix | Marking | Description |
|---|---|---|
| J/C | 5216507 | UL approved No. |
| B/E/EN/G | VTP52Z5-011F | |
| U/UT | VTP54G5-001F | |




2.Power cord : Make sure of the following markings and inspect exterior scratch anddamage.

| | Power cord | Attachment plug |
|---|---|---|
| J | SPT-1 | KP-10W or SU-1P |
| C | SPT-1 | KP-10W or SU-1P |
| E/EN/G | ◁VDE▷ | KP-419C or SE-1 |
| B | BASEC BS6500 | KP-610 3A |
| U/UT | ◁VDE▷ | KP-8H |

3. Install the cord bushing by the specified tool whileconfirming the marking. Bushing : NIFCO 2271

4. Wiring terminal

a)When installing the power cord,wind it around the terminal by the end before soldering.

b)Arrange the wires while binding them nearby the terminal.

c)The end of respective power cords is soldered in the air and the space from others must be 3.2 mm or more in the distance.

7. Since the following parts are hear generation ones, they must no contact with electolytic capacitors, wires, etc.

● Following parts are inflammables. Make sure of their lift – up condition for the purpose.

● Parts in box [ ] must be controlled by JVC.
D901 D902 D903 D904 Q901 Q903 Q905 Q909 Q912 Q915 R755 R901 R902 R917 R918 R921 R923 R933 R937 R940 R1453 R2453 R8482 C901 C902 C903 C904 C914 IC901

Other parts

C903 C904 2200uF/25V C/J virsion (VENT TYPE)

8. All fuses must securely be connected.

In B/ E/EN/G/U/UT version, F901 and F902 must be specified by the rating of 800 mA shown on the surface as well as by the marking of Ⓢ or ⛉. In U/UT version, F903 must be specified by the rating of 315 mA shown on the surface as well as by the marking of Ⓢ .

JVC

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JVC

■ Instructions

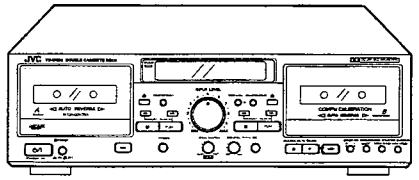


## DOUBLE CASSETTE DECK

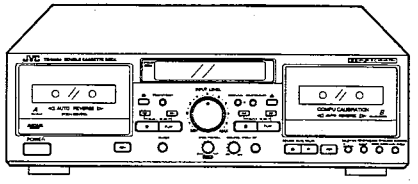
# TD-W354 B/J

**Area suffix**
B ..... U.K.
J ..... U.S.A.

COMPU LINK
Component



(B version)



(J version)

# INSTRUCTIONS

**For Customer Use:**
Enter below the Model No. and Serial No. which are located on the rear of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION "TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL."

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:**

**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

**IMPORTANT (In the United Kingdom)**
Mains Supply (AC 230 V ~, 50 Hz only)

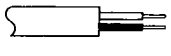
DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

BE SURE to replace the fuse only with an identical approved type, as originally fitted and to replace the fuse cover.

If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:



Blue to N
(Neutral) or Black
Brown to L
(Live) or Red

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT-CONSULT A COMPETENT ELECTRICIAN.

Please study this instruction manual carefully before starting to operate the unit, in order to use the unit correctly. We take no responsibility for any problems resulting from misuse of this unit by operating this equipment other than instructed in this manual.

**WARNING (In the United Kingdom)**
Pre-recorded tapes, records or discs should not be re-recorded without the consent of the owners of copyright in the sound recording and in any copyright musical or literary work embodied in that recording as this constitutes an infringement of copyright.

**INFORMATION (FOR U.S.A.)**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



## INTRODUCTION

Thank you for purchasing a JVC product. Read this instruction book carefully before operating to be sure of getting optimum performance and longer service life from the unit.

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## FEATURES

1. **Double auto-reverse mechanism for recording/playback in deck B and playback in deck A**
2. **COMPU CAL function which automatically sets the flat characteristics and brings out maximum tape performance.**
3. **Full logic mechanism**
4. **Dolby* HX PRO headroom extension**
5. **Dolby B & C noise reduction system**
6. **DDRP (Dynamics Detection Recording Processor) compatibility**
   The DDRP function is possible only when used with a suitable JVC CD player.
7. **2-color FL peak level indicator**
8. **Digital tape counter respectively for deck A and deck B**
9. **Synchro start (normal-/high-speed) dubbing**
10. **Auto tape select mechanism (decks A and B)**
11. **Multi music scan mechanism for either direction**
    "Under License of Staar S.A., Brussels, Belgium"
12. **PITCH control**
13. **Microphone mixing is possible**
14. **COMPU LINK-3 compatible**

* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
* "Dolby", the double-D symbol ⧈ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

COMPU LINK control system is the convenient system using COMPU LINK-3/SYNCHRO terminals on the rear panel. (See page 5 and 11.)

*D·D·R·P*
*DYNAMICS DETECTION RECORDING PROCESSOR*

This product can be combinated with a DDRP (DYNAMICS DETECTION RECORDING PROCESSOR) system (compact disc player + cassette deck, etc.) to enable setting the optimum recording level automatically. Refer to these instructions for details.

## AUTO REVERSE OPERATION

The auto reverse operation of this unit turns the tape transport over to the reverse of forward direction automatically when the tape reaches its end during recording or playback.

- Because of cassette shell construction, a tape recorded in the forward direction should be played back in the same direction to obtain stable sound reproduction.
- During recording, auto reverse can be activated only from the forward to the reverse direction. For good sound quality and to avoid accidental erasure of previously recorded material, always start recording with the side A of the tape facing out.

## CAUTIONS

1. **Prevention of Electric Shocks, Fire Hazards and Damage**
1) Even when the POWER switch is set to STANDBY, a very small current will flow. To save power and for safety when not using the unit for an extended period of time, disconnect the power cord from the household AC outlet. **(For J version)**
2) Do not handle the power cord with wet hands.
3) When unplugging from the wall outlet, always grasp and pull the plug, not the power cord.
4) Consult your nearest dealer when damage, disconnection, or contact failure is found with the cord.
5) Do not bend the cord sharply, or pull or twist it.
6) Do not modify the power cord in any manner.
7) Do not remove screws to disassemble the unit and do not touch anything inside the unit.
8) AC power cord **(For J version only)**
   The AC power cord of this unit has certain one-way direction connections to prevent electric shock. Refer to the illustration for correct connection. (Fig. 1)

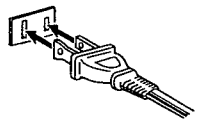


**Fig. 1**

**(For CANADA)**
**CAUTION**
**TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.**

**(Pour le CANADA)**
**ATTENTION**
**POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.**

9) Do not insert any metallic objects into the unit.
10) Unplug the power cord when there is a possibility of lightning.
11) If water gets inside the unit, unplug the power cord from the outlet and consult your dealer.
12) Do not block the ventilation holes of the unit so that heat can escape. Do not install the unit in a badly ventilated place.
13) Be sure to unplug the power cord from the outlet when going out or when the unit is not in use for an extended period of time.

**2. Installation**

1) Avoid placing the unit on or adjacent to an amplifier, to prevent hum from being produced by some types of amplifiers. Move the unit to a place not affected by the amplifier. Keep the unit as far as possible from a TV set.
2) Avoid installing the unit in a location subject to ambient temperatures exceeding 40 °C (104 °F) (e.g. direct sunlight, near heaters, etc.) or less than 0 °C (32 °F), excessive humidity, dust or vibrations.
3) If this set is moved suddenly from a cold place (0 °C) to a warm place, it may not function properly because of moisture generated inside the unit. The unit will function properly 30 minutes after being moved.

**3. Cleaning the cabinet**

Never use benzine or thinner for cabinet cleaning as they may damage the surface finish.

**4. Cassette tape**

1) Loose tape may become tangled in the tape transport mechanism. Remove slack by winding the tape with a pencil.
(Fig. 2)

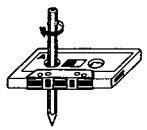


**Fig. 2**

Turn the pencil to tighten the tape.

2) The use of C-120 (120 minutes turn around) or thinner tape is not recommended, since characteristic deterioration may occur.
3) To prevent recordings from being erased accidentally, remove the tab(s) with a screwdriver. Reseal the slots with adhesive tape to erase and re-record after the tabs have been broken off.

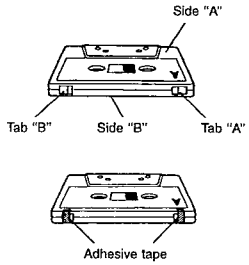



**Fig. 3**

4) Do not store cassette tapes where there is a magnetic field (e.g. near a TV, etc.) or in a place subject to high temperatures or humidity.

**5. Auto tape select mechanism (decks A and B)**

This deck has an Auto Tape Select mechanism which distinguishes between different types of tape from holes in the cassette. After the type of tape has been detected, bias and equalization are set to be suitable for the tape.

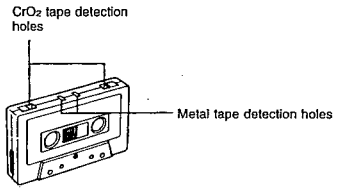
- Cassettes with the detection holes:

  Metal tape (EQ: 70μs) ..... Type IV
  $CrO_2$ (chrome) tape (EQ: 70μs) ..... Type II

- Cassettes without the detection holes:

  Normal tape (EQ: 120μs) ..... Type I

Some earlier types of metal and $CrO_2$ (chrome) tapes may not be provided with the detection holes. Avoid using such tapes, since correct equalization characteristics cannot be obtained. Also do not use ferrichrome tapes whose characteristics do not match this unit.




**6. Operations**

1) Noise may be generated if the power is on or in standby with the deck set to playback or recording mode. Before turning the power on or setting to standby, confirm that the ■ (stop) button has been pressed.
2) Many operations of this unit are performed under the control of a microcomputer. Use the unit only after carefully studying the descriptions and cautions in each item. If operations are done incorrectly, the unit may stop functioning correctly. If this happens, turn off the power once, and then turn it on again, so that the unit can function correctly.



## CONNECTIONS

- Do not switch the power on until all the connections are completed.
- Insert the plugs firmly, or poor contact will result, causing noise.
- When the pin-plug cords are employed, always connect the white plug to the left channel terminal. This helps to avoid reversed connections.
- When using the Compu Link Control System version 3, do not connect the power cord to the SWITCHED AC OUTLET of an amplifier or receiver. **In the B version,** turn the deck ⏻ POWER switch ON. Otherwise, the automatic power on/off (STANDBY) function cannot be carried out.

**1. Connection to a stereo amplifier**

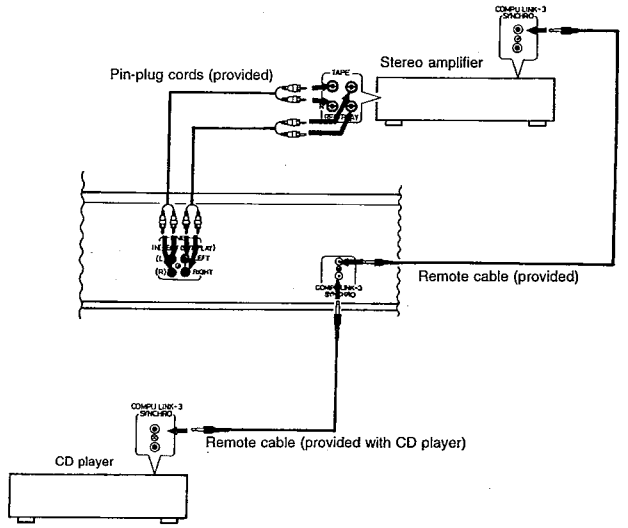
**Note:**
When installing the deck, be sure to install at a distance from your amplifier. If they are stacked, noise (hum) may occur.

**2. Remote cable connection for COMPU LINK**

- By connecting a remote cable, COMPU LINK functions (automatic power on/off (STANDBY), automatic source selection, synchronized recording and DDRP recording) can be performed. In this time the provided pin-plug cords must be also connected.
- When making synchronized recording with a CD player, connect the remote cable to the COMPU LINK-1/SYNCHRO or COMPU LINK-3/SYNCHRO jacks.

**Notes:**

1. When making synchronized recordings, only a single deck should be connected to the amplifier.
2. If a component is not a JVC COMPU LINK component, bypass it when making the remote cable connections.
3. This deck can be connected with an amplifier and a CD player which have the COMPU LINK-1/SYNCHRO jacks for COMPU LINK performance. (See page 11 for details.)

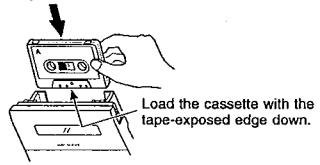



## CASSETTE LOADING

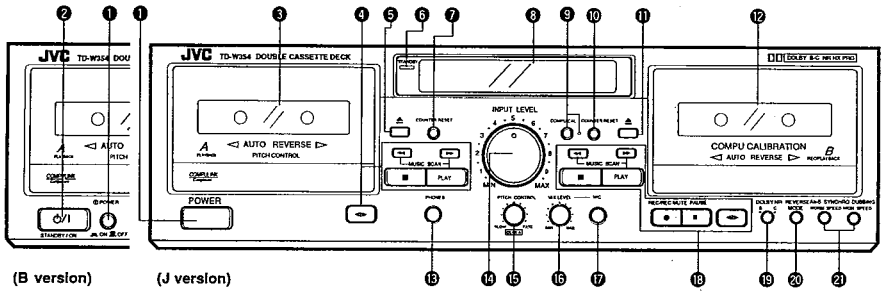
1. Press the ⏏ (eject) button to open the cassette holder.
2. Load a cassette as shown.
3. Press the cassette holder to close it. Be sure to obtain the click sound to close the holder securely.

**Notes for B version:**

- If the ⏻ POWER switch is set to OFF while the tape is moving, you might not be able to remove the cassette. If this happens, switch the power on again before attempting to remove the cassette.
- Setting the ⏻ POWER switch to OFF during playback may cause a malfunction. Always stop playback before setting the ⏻ POWER switch to OFF.



## NAMES OF PARTS AND THEIR FUNCTIONS

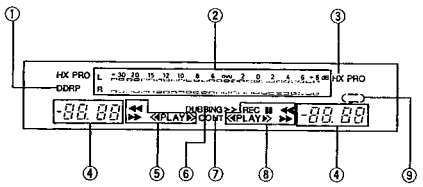


(B version) (J version)

❶ **⏻ POWER switch ( ON OFF) (B version)**
**POWER switch (On/Standby) (J version)**
❷ **⏻/I switch (STANDBY/ON) (B version)**
❸ **Cassette holder (deck A)**
❹ **Cassette operation buttons (deck A)**
◄◄ : Press to wind the tape quickly from right to left.
►► : Press to wind the tape quickly from left to right.
PLAY : Press to play the tape.
■ (stop) : Press to stop the tape.
◄I► (direction) : Press to change the direction of tape travel.
❺ **≙ (eject) button (deck A)**
❻ **Power STANDBY indicator**
Lights when in the power standby mode.
❼ **COUNTER RESET button (deck A)**
Press this button to set the digital counter to "00 00".
Even if the POWER switch is set to STANDBY, the counter value at that time is stored in memory.
❽ **Indicators**
① DDRP indicator
② Peak level indicator
These indicators light according to the level of the signal being recorded or the level of the signal recorded on the tape.
**Note:**
0 dB : IEC (DIN) STANDARD LEVEL (250 nWb/m)
0 VU : Signal level at 160 nWb/m
③ HX PRO indicator
④ Digital counter
The counter reading increases while the tape is running forward and decreases when it is running in reverse. In the Multi Music Scan mode when the ◄◄ (or ►►) button is pressed, the number of tunes which will be skipped is displayed.
⑤ Mechanism mode indicators (deck A)
►► : This lights when rewinding the tape from left to right.
◄◄ : This lights when rewinding the tape from right to left.
PLAY : This lights when in the playback.
◄ , ► : Indicates the direction of tape travel.
⑥ DUBBING >> : ">" lights when in the normal-speed dubbing mode.
">>" lights when in the high-speed dubbing mode.
⑦ CONT : Lights when the unit is in the continuous play mode.
⑧ Mechanism mode indicators (deck B)
PLAY : Lights when the unit is in the playback and record modes.
◄ , ► : Indicates the direction of tape travel.
REC : Lights when the unit is in the record and record-pause modes; blinks during record muting.
II : Pause indicator
►► : This lights when rewinding the tape from left to right.
◄◄ : This lights when rewinding the tape from right to left.
⑨ ⇄ : Indicates reverse mode.
❾ **COMPU CAL button and indicator**
Press this button to automatically set the recording characteristics with the COMPU CAL function. (See page 9.)
❿ **COUNTER RESET button (deck B)**
⓫ **≙ (eject) button (deck B)**
⓬ **Cassette holder (deck B)**
⓭ **PHONES jack**
Connects headphones (with an impedance of 8 Ω to 1 kΩ).
⓮ **INPUT LEVEL control**
⓯ **PITCH CONTROL (deck A)**
Varies the tape speed in deck A in the range of about ±10%. However, it cannot change the tape speed in the high-speed dubbing.
Turning it counterclockwise toward "SLOW" causes the tape speed to decrease while turning clockwise toward "FAST" causes it to increase. The center click position is for the standard speed. (See page 8.)
⓰ **Mixing microphone level control**
Adjusts the microphone input level.
⓱ **MIX MIC jack**
Connects a microphone (with an impedance of 600 Ω to 10 kΩ) to this jack.
Sounds from the microphone are monaural.

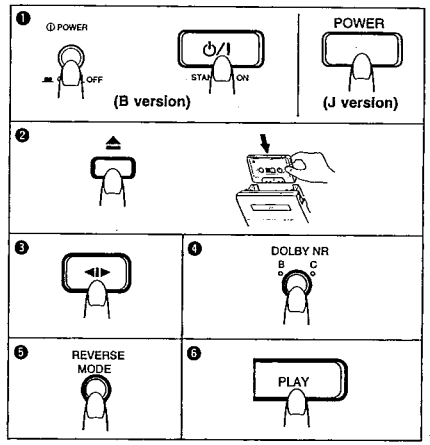


❽



⓲ **Cassette operation buttons (deck B)**
◄◄ : Press to wind the tape quickly from right to left.
►► : Press to wind the tape quickly from left to right.
■ (stop) : Press to stop the tape. Also press to stop both decks simultaneously during dubbing.
PLAY : Press to start playback/recording.
●REC/ REC MUTE : Press the PLAY button while pressing this button to start recording, and press to leave an appropriate non-recorded section. (See page 10.)
IIPAUSE : Press to stop the tape temporarily during recording and playback. Press the PLAY button to release the pause mode.
◄I► (direction) : Press to change the direction of tape travel.
⓳ **DOLBY NR button and indicators**
Set to B or C for recording using the Dolby NR system or for playing back a tape that was recorded using the Dolby NR system. Each time the button is pressed the NR mode changes and the indicator lights. (Dolby B NR -> Dolby C NR -> NR OFF -> Dolby B NR ...)
Set to OFF when the Dolby NR system is not used.
⓴ **REVERSE MODE switch**
Select the single side or full record/playback mode, or the continuous play mode. Each time the button is pressed the mode changes. (⇄ -> ⇉ -> ⇆ -> ⇄ ...) The current mode can be checked with the mechanism mode indicator.
⇄ : For single-side recording or playback.
⇉ : To play or record both sides A and B.
⇆ : To play sides A and B continuously.
㉑ **A ► B SYNCHRO DUBBING buttons**
Press to dub from deck A to deck B.
• NORM SPEED : Press to perform normal-speed dubbing.
• HIGH SPEED : Press to perform high-speed dubbing.

## PLAYBACK




**Playback of deck A**
Operate in the order of the numbers in the illustration.
❶ Turn the power on.
❷ Load a prerecorded cassette with side A facing out.
❸ Select the side to be played back.
Side A... Forward direction (PLAY ►)
Side B... Reverse direction (◄ PLAY)
❹ Set the DOLBY NR switch to the same setting as when the tape was recorded.
❺ Select the REVERSE MODE.
❻ Press the PLAY button of deck A to start playback.
• When the deck contains a tape, the deck is turned on automatically and the tape is played back by only pressing the PLAY button.

**Playback of deck B**
Perform steps ❷ to ❻ of the above procedure for deck B.

**Microphone mixing during playback**
By connecting a microphone, microphone mixing with playback sound from deck A or deck B is possible.

**Continuous play**
First set the REVERSE MODE switch to ⇆.
Load cassette tapes in both decks and press the PLAY button of the deck to be played first for continuous play of both decks.
• At this time, the CONT indicator lights in the multimode display. When the tape in the deck which plays first reaches the end of side B (in the reverse direction), it automatically switches to the forward direction and enters the standby mode. At the same time, the other deck starts playback. These operations continue between decks A and B.
• While one deck is playing back, the cassette in the other one can be replaced. This is convenient for long-time playback of background music.

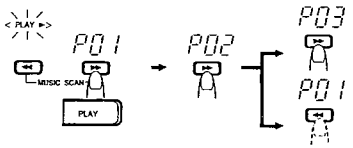
**Note:**
• Use tapes recorded using the same NR mode in decks A and B.

**PITCH control (deck A)**
It is possible to vary the tape speed in deck A in the range of about ±10% in the playback mode. The center click position is for the standard tape speed.

## MULTI MUSIC SCAN

- The multi music scan mechanism of this unit allows you to quickly locate the beginning of a specific tune (up to 99 tunes before or after the current tune).
- The multi music scan mechanism functions by detecting non-recorded sections between tunes (of more than 4–5 sec.).
- The illustration shows the forward direction.

Example of fast forward scan.




**Procedure**

1. Press the ▶▶ button during playback.
2. When more than 2 tunes are to be skipped, after procedure 1 press the ▶▶ (or ◀◀) button the number of times you want to skip tunes. The number of tunes to be skipped is displayed in the counter.

- Relation between Multi Music Scan and REVERSE MODE.

⇄ : The multi music scan mechanism operates on one side of the tape only. If the number set is too high (more than there are tunes remaining on that side), the tape stops when the end of the tape is reached.

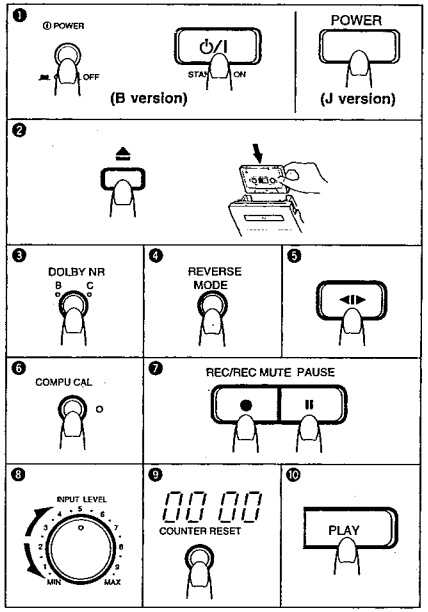
⇄ : It operates continuously through one cycle of the A and B sides of the tape. If the number set has not been reached, the tape stops at the end of the B side. When the head rotates to play side A from B or B from A, this rotation is counted as one non-recorded section. When a recorded tune continues from side A to B, this tune is recorded as two tunes. In such a case, press the ◀◀ (or ▶▶) button one extra time.

**Notes:**
In the following cases, the mechanism may not operate correctly. This is not a malfunction; use the mechanism according to the type of program.
- Tapes with tunes having long pianissimo passages (very quiet parts) or non-recorded portions during tunes.
- Tapes with short non-recorded sections.

## RECORDING

**Deck B only**
Operate in the order of the numbers in the illustration.
- Make sure the safety tab of the cassette has not been broken off.

It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.




❶ Turn the power on.
❷ Load a cassette for recording.
❸ Set the DOLBY NR switch as required.
❹ Set the REVERSE MODE switch as desired.
❺ Select the side to be recorded.
❻ Press the COMPU CAL button, if required. (See page 9.)
❼ Press the ❚❚PAUSE button and ●REC/REC MUTE button (record-pause mode).
REC and ❚❚ indicators light.
❽ Adjust the recording level. (See page 10.)
❾ Press to "00 00".
❿ Press the PLAY button to start recording.

**Notes:**
- When the safety tabs are removed from a cassette tape, the tape cannot be recorded even if you try. Make sure that both tabs are still in place when performing full recording.
- When the tape is played or recorded in the reverse direction (side B), only side B is played back or recorded and then the tape stops automatically.

**DDRP (Dynamics Detection Recording Processor) recording**

DDRP recording is performed with suitable JVC CD players and the recording level adjustment is performed automatically.
Since recording level adjustment is performed automatically for different types of tape (normal, $CrO_2$ and metal), the adjustment of INPUT LEVEL control is not required.
Read the instruction book of your CD player carefully.

### COMPU CALIBRATION (COMPU CAL) FUNCTION

- This unit is equipped with a COMPU CAL function which can automatically set the flat frequency characteristics and optimal tape sensitivity for each tape in approximately 30 seconds. Calibration data is retained for each tape type (Type I, II or IV).
- Calibration data set with COMPU CAL is retained even if the power is turned off (or the power cord is unplugged), and the previous calibration data for the same type of tape as the new tape is recalled each time tapes are changed.
- Performing COMPU CAL operations again replaces existing data with the new data.

**COMPU CAL operation**

- Insert the tape to be recorded and press the COMPU CAL button. During the operation, "C" -> "CA" -> "CAL" is displayed in the tape counter. When the operation finishes, the tape returns to its starting position, and the COMPU CAL indicator lights. COMPU CALIBRATION is now finished.
- Pressing the ■ (stop) button part-way will interrupt the operations.
- To recalibrate the unit, press the COMPU CAL button and wait for the COMPU CAL indicator to go out. Then, press the COMPU CAL button again.

**Note:**
If the tape is near its end, it will automatically stop and an error will be generated during operation. Therefore, be sure to check the time remaining on the tape (more than 2 minutes in the play mode) before starting the operations.

**COMPU CAL Errors**

- When the COMPU CAL indicator flashes, this indicates a COMPU CAL error.
- Press the ■ (stop) button to stop the error indication.

Care should be taken for the following items as they are the cause of errors.

1) Dirty heads -Clean the heads.
2) Scratches on the tape surface -Replace with an undamaged tape.
3) When the tape ends part-way through the operations -Change the tape position.
4) In rare cases, tapes may have characteristics which fall outside the COMPU CAL setting range.

- When an error occurs or when COMPU CAL operations are interrupted, calibration data cannot be stored in the memory. If settings were previously performed, the previous setting values are retained.
- After confirming items 1) to 3) above and stopping the error indication if there are no problems, even tapes which experience errors can be recorded on using either ① the unit's preset values or ② previous setting values. (These are the values obtained by opening and closing the cassette holder one time.)
  * Preset value: a standard value corresponding to each type of tape, which allows normal recording. (The preset value condition is in effect when the COMPU CAL indicator is unlit.)

**Notes:**
1. Since COMPU CAL operations record a test tone on tapes, previously recorded contents will be erased.
2. Using new tapes and cleaning the heads beforehand are recommended for optimal COMPU CAL operations.
3. Some variance in characteristics exists even with the same type of tape made by the same manufacturer. Therefore, when precise settings are desired, performing COMPU CAL operations for each recording is recommended.
4. To delete contents set with COMPU CAL, simultaneously press the ●REC/REC MUTE and B deck COUNTER RESET buttons. This deletes the calibration data for the type of tape currently inserted in the unit. Calibration data for other tape types is not deleted.

## MICROPHONE MIXING DURING RECORDING

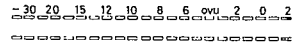
By connecting a microphone, microphone mixing during recording is possible by following the recording procedure. Adjust the microphone input level by setting the record-pause mode and observing the peak level indicators.

- When the record-pause mode is set and the INPUT LEVEL control is set to MIN, sounds are output only from the microphone, and it can be used as a public address system.

## RECORDING LEVEL ADJUSTMENT

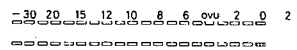
Adjust the recording level while observing the peak level indicator indication.

For example:
With metal tape




Because of metal tape's higher saturation level, it is OK that "+ 2" lights occasionally.

With normal or chrome tape




It is OK that "+ 0" lights occasionally.

- When the recording level is too low, the hiss noise inherent in the tape will be conspicuous.
- When the recording level is too high, exceeding the saturation level, the recording will contain cracking noise and will be distorted.
- If "+ 4" lights too often because the recording level is too high, the recorded sound may be distorted and seem to be breaking up. If only "0" lights infrequently, the level is too low and the recording may contain tape hiss.

It is best to adjust so that the maximum sound level of the source to be recorded reaches the very limit of the saturation level of the tape to be used.
The best level varies depending on the type of music and type of tape so it is better to make a test recording, using FM music, records, etc.

## AUTOMATIC RECORD MUTING (DECK B)

This facility is used to eliminate undesired sections and leave an appropriate non-recorded section.

**A. To leave non-recorded sections of about 4–5 seconds automatically**

1. When the undesired section comes during recording, press the ●REC/REC MUTE button and release it.
2. The REC indicator flashes and a non-recorded section is made during record muting operation. About 4–5 seconds later, the tape automatically stops, and the unit enters the record-pause mode.
3. Press the PLAY button to start recording again.

**B. To leave non-recorded sections of more than 4–5 seconds**

1. Keep the ●REC/REC MUTE button pressed continuously as long as you want to make a non-recorded section. By releasing the finger from the button after the above operation, the unit enters the record-pause mode.
2. Press the PLAY button to start recording again.

**C. To leave non-recorded section of less than 4-seconds**
When the undesired section comes during recording....
After the ●REC/REC MUTE button is pressed, press the PLAY button before the unit enters the pause mode to start recording again, or press the ❚❚PAUSE button to enter the record-pause mode.

- The peak level indicator lights even during record muting according to the input level which can be heard from the speakers or headphones so that recording can be resumed at the exact point on the tape.

**ERASING**
When recording on a prerecorded tape, the previous recording is automatically erased and only the new program is recorded on the tape.
**To erase a tape without making a new recording...**
Follow the section "RECORDING" but in step ❽, set the INPUT LEVEL control to MIN.

**DOLBY NR and DOLBY HX PRO**

**Dolby NR System**
To reduce the hiss inherent in tape recording, use the Dolby NR System when making recordings. When listening to a tape recorded with the Dolby NR System, set the DOLBY NR switch to B or C according to the system selected in the recording mode.

**Note:**
The sound quality will change if the positions of the DOLBY NR switch are different in recording and playback.

**Dolby HX PRO headroom extension**
When a source which contains many high-frequency components is recorded, these high-frequency signals have the same function as bias and therefore, the effective bias current changes.
This will result in phenomena such as changes in the level of low-frequency signal and subsequent distortion and reduction of the high-frequency saturation level.
Dolby HX PRO headroom extension system controls the bias current so that the effective bias is constant even when there are fluctuations in the high-frequency components of the input signal.
This greatly improves the high-frequency saturation level while reducing the low-frequency signal level variations and distortion.

- The dynamic sound recorded with this system sounds the same even when the tape is played back in a deck that does not have Dolby HX PRO.
- This system automatically works when in recording; however, Dolby HX PRO is not a noise reduction system.



# COMPU LINK CONTROL SYSTEM

The Compu Link Control System controls relative operations between components automatically and facilitates various operations.
This is a system originated and developed by JVC for facilitating various system operations. There are two versions of this system; version 1 and 3. (For version 1 components, "COMPU LINK-1/SYNCHRO" is marked on the rear panel. For version 3 components, "COMPU LINK-3/SYNCHRO" is marked on the rear panel. This unit belongs to version 3.)
The version 3 system controls relative functions between this unit and an amplifier or receiver, in addition to all of the functions of version 1.

**Automatic Power On/Off (STANDBY) Function (COMPU LINK-3)**
This function is available when an amplifier or receiver having a COMPU LINK-3/SYNCHRO terminal is connected. For example, if a deck contains a tape, the deck is turned on automatically and the tape is played back by only pressing the PLAY button. When the amplifier or receiver is switched STANDBY, the source unit is automatically switched STANDBY. **(In the B version,** it is necessary to turn the deck ⏻ POWER switch ON.)

**Automatic Source Selection (COMPU LINK-1, 3)**
When the provided remote cables are used for connecting this unit to other components which have COMPU LINK-1 or 3/SYNCHRO terminals, the switch-over of all system components is possible with simple one-touch of the source selector button of JVC's amplifier or receiver.
By doing this, the corresponding component will start playing automatically.
The source select button of the remote control unit or the activation button of the desired component can be also used for this purpose. When the components have been switched over, the previous component will stop playing within five seconds.

**Synchronized Recording (COMPU LINK-1, 3)**
Synchronized recording refers to the process in which the deck starts recording in synchronism with the CD player. Perform the synchronized recording as follows:

1. Set the cassette deck to the record-pause mode in accordance with the recording procedures on page 8.
2. If you want the programmed recording, program the desired tunes in any order you wish to hear.
3. Press the PLAY/PAUSE button of the CD player. By so doing, the cassette deck is placed in the record mode and synchronized with the CD player for recording. Synchronized recording thus can be made possible.

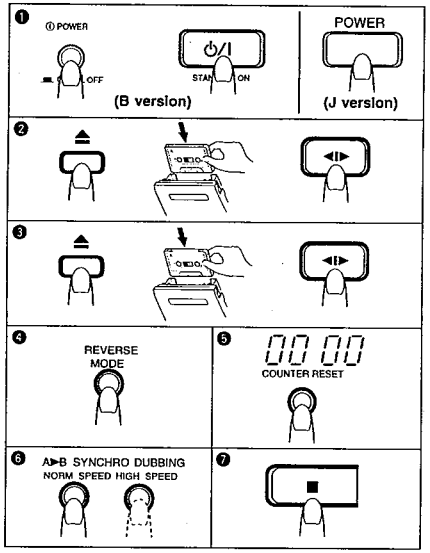
**DDRP (Dynamics Detection Recording Processor) recording**
The DDRP function makes possible fully automatic recording when used with a suitable JVC CD player. When the DDRP button of a suitable JVC CD player is pressed, the recording level is first adjusted automatically, then recording starts; it is not necessary to start recording by the normal procedure.

**Notes:**

- Synchronized recording or DDRP recording stops automatically when the CD player stops playing.
- Synchronized recording does not start except when the record-pause mode is set by simultaneously pressing the ●REC/REC MUTE and ❚❚PAUSE buttons in the stop mode.
- To cancel synchronized recording or DDRP recording, press the STOP button of the CD player or cassette deck.
- The source is locked to the CD position during synchronized recording or DDRP recording to avoid accidental stops or switch-over to another component. To switch over the components, cancel synchronized recording or DDRP recording first.
- The INPUT LEVEL control does not function during DDRP recording.

## DUBBING

**· Synchro dubbing**
Operate in the order of the numbers in the illustration.




❶ Turn the power on.
❷ Insert a prerecorded tape with side A facing out into deck A, and press the ◀▮▶ (direction) button to select the travel direction.
❸ Insert the blank tape with side A facing out into deck B, and press the ◀▮▶ (direction) button to select the side to be recorded.
❹ Select the REVERSE MODE.
❺ Press to "00 00". (Deck B)
❻ Press the SYNCHRO DUBBING (NORM or HIGH SPEED) button to start dubbing.
❼ Press the ■ (stop) button of deck B to stop dubbing.

When deck B stops, the dubbing mode is automatically released.

**· Synchro record muting**
When deck A stops or enters any mode other than the playback mode during dubbing, deck B enters the record mute operation automatically and then enters the record-pause mode.

**· Before pressing the SYNCHRO DUBBING button**
Confirm that deck B is in the stop mode before starting dubbing.

**Dubbing and DOLBY NR switch**
During dubbing, the same NR mode selected for the playback cassette is applied to the recording cassette, regardless of the position of the NR switch.

**Input level**
Recording is performed at the same level as the playback tape during dubbing regardless of the position of the INPUT LEVEL control.

**Microphone mixing during dubbing**
By connecting a microphone, microphone mixing during dubbing is possible with the playback sounds from deck A. Be sure to perform dubbing at normal speed. When performing microphone mixing during dubbing, use cassettes recorded with NR OFF mode for the deck A.

**Tape editing**
1. Press the ●REC/REC MUTE button when finished dubbing a tune. Deck B automatically enters the record muting mode and leaves a non-recorded section of about 4-seconds then enters the record-paused mode.
2. Press the ■ (stop) button of deck A and search for the next tune you want by using the ▶▶, ◀◀ or PLAY button. Then stop the cassette just before the beginning of the tune.
3. Press the same SYNCHRO DUBBING button pressed before the pause again, and dubbing will start.

**Notes at dubbing**
1. Normal-speed dubbing is recommended to obtain good sound quality.
2. Television receivers placed close to the deck may cause interference on the recorded signal when the deck is used in the high-speed dubbing mode. If this happens, either turn off the television receiver or use the normal-speed dubbing mode.

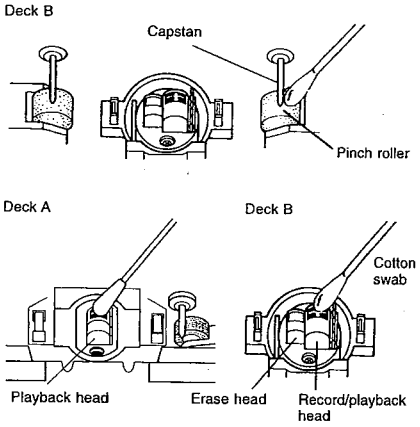


## MAINTENANCE

**The importance of cleaning**
When the tape is moving, magnetic powder and dust naturally accumulate on the heads, capstan and pinch roller. When they become too dirty.
- tone quality deteriorates.
- the output sound level drops.
- the previous sound is not erased satisfactorily.
- recordings are not satisfactory.

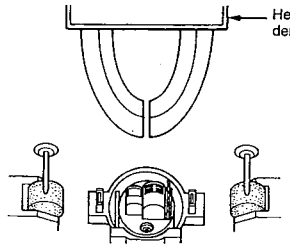
Because of this, clean the heads, etc. every 10 hours of use so that optimum recordings will be made.

**Cleaning the heads, pinch roller and capstan**
Wipe the heads, the capstan, etc. with a cotton swab with its tip dipped in alcohol. For effective cleaning, use a cleaning kit available from your audio store. After cleaning, be sure that the cleaning fluid has completely dried before loading a cassette.




**Demagnetizing the heads**
Magnetic objects brought close to the head or using the deck for a long period of time, results in magnetization of the head, thus noise occurs. When the noise is excessive, high frequencies on the recorded tape may be erased.
Demagnetize the heads and other metal parts that come into contact with the tape every 20–30 hours of use with a head demagnetizer (available from your audio store).

Example: Deck B



## TROUBLESHOOTING

**What appears to be trouble is not always real trouble. Make sure first....**

1. **Cassette cannot be loaded.**
   - Is the cassette positioned correctly?
2. **When PLAY button is pressed, tape does not move.**
   - Is the tape too loosely wound?
3. **Tape runs, but no sound is heard.**
   - Are all connections properly and securely made?
   - Is the MONITOR switch of the stereo amplifier set to the TAPE position?
   - Is the VOLUME control of the stereo amplifier set to MIN?
4. **Sound quality is poor.**
   - Is the DOLBY NR switch set to the right position?
   - Is the head section dirty?
   - Is the record/playback head magnetized?
   - Is the tape worn out?
5. **Recording cannot be performed.**
   - Are the safety tabs of cassette tape broken?
   - Are all connections properly and securely made?
   - Is the head section dirty?
6. **Previous recording is not completely erased.**
   - Is the erase head dirty?
7. **Since tape speed is irregular, wow and flutter occur.**
   - Is the pinch roller or capstan dirty?
   - Is the tape rewound too tight?
8. **MUSIC SCAN operation does not function properly.**
   - Are the non-recorded sections too short (3 sec. or less), or do they contain high level noise or hum?



## SPECIFICATIONS

| | |
|---|---|
| Type | : Double cassette deck |
| Track system | : 4-track, 2-channel |
| Tape speed | : 4.8 cm/sec (1-7/8 inch/sec) (Normal)<br>9.5 cm/sec (3-3/4 inch/sec) (High) |
| Frequency response | : (–20 dB recording)<br>Type IV tape ; 20–17,000 Hz<br>30–16,00 Hz (±3dB)<br>Type II tape ; 20–16,000 Hz<br>30–15,000 Hz (±3dB)<br>Type I tape ; 20–16,000 Hz<br>30–15,000 Hz (±3dB) |
| S/N ratio | : 58 dB (S = 315 Hz, k3 = 3%,<br>N = A-weighted, Type IV tape)<br>The S/N is improved by about 15 dB at 500 Hz and by max. 20 dB at 1 kHz ~ 10 kHz with Dolby C NR on and improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with DOLBY B NR on. |
| Improvement of MOL | : 4 dB at 10 kHz with Dolby C NR on. |
| Wow and flutter | : 0.08% (WRMS), ±0.2% (DIN/IEC) |
| Channel separation | : 40 dB (1 kHz) |
| Crosstalk | : 60 dB (1 kHz) |
| Harmonic distortion | : k3; 0.8% (Type IV tape, 315 Hz, 0 VU) |
| Heads | : Deck A; METAPERM head for playback x 1<br>Deck B; METAPERM head for recording/playback, 2-gap ferrite head for erasure; combination head x 1 |
| Motors | : Electric governed DC motor for capstan x 1<br>DC motor for reel x 1<br>DC motor for mechanism drive x 1<br>(For both decks A and B) |
| Fast forward/rewind time | : Approx. 110 sec. with C-60 cassette |
| Input terminals | |
| LINE IN (x 1 circuit) | : Input sensitivity; 80 mV (0 VU)<br>Input impedance; 50 kΩ |
| MIC x 1 (Monaural) | : Input sensitivity; 0.4m V (–68dBV) (0 VU)<br>Matching impedance; 600 ~ 10 kΩ |
| Output terminals | |
| LINE OUT (x 1 circuit) | : Output level; 300 mV (0 VU)<br>Output impedance; 5 kΩ |
| PHONES x 1 | : Output level; 0.3 mW/8 Ω (0 VU)<br>Matching impedance 8 Ω–1 kΩ |
| Other terminals | : COMPU LINK-3/SYNCHRO x 2 |
| Power requirement | : AC 230 V, 50 Hz (B version)<br>AC 120 V, 60 Hz (J version) |
| Power consumption | : With power on 17 W<br>With power standby 4.0 W |
| Dimensions (W x H x D) | : 435 x 139 x 331 mm<br>(17-3/16" x 5-1/2" x 13-1/16") |
| Mass | : 5.1 kg (11.3 lbs.) (B version)<br>5.0 kg (11.1 lbs.) (J version) |
| Accessories | : Pin plug cord ..... 2<br>Remote cable ..... 1 |

Design and specifications are subject to change without notice.

# 1 Location of Main Parts

## ■ Top view

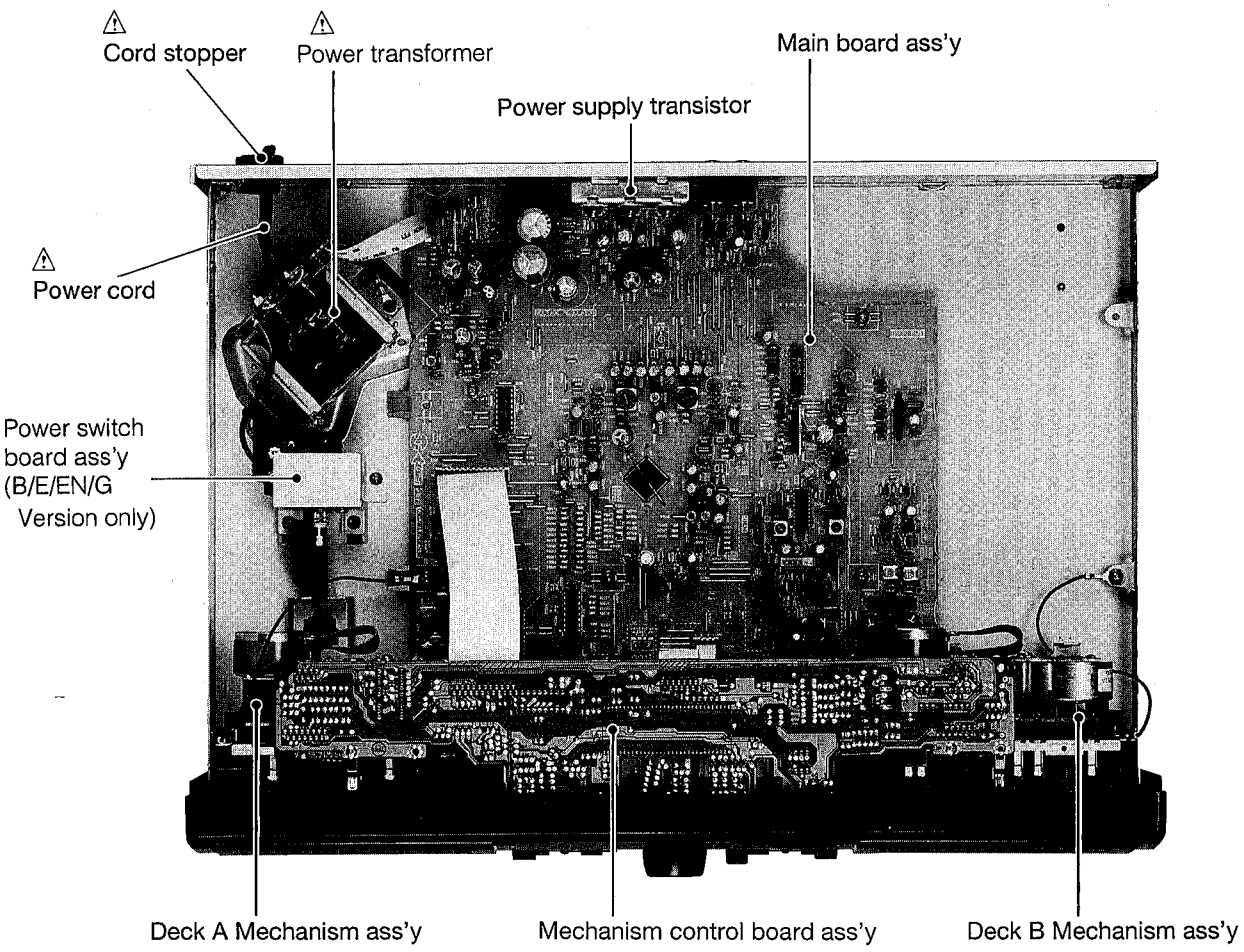



Fig. 1 – 1

## ■ Mechanism

### ◆ Top view

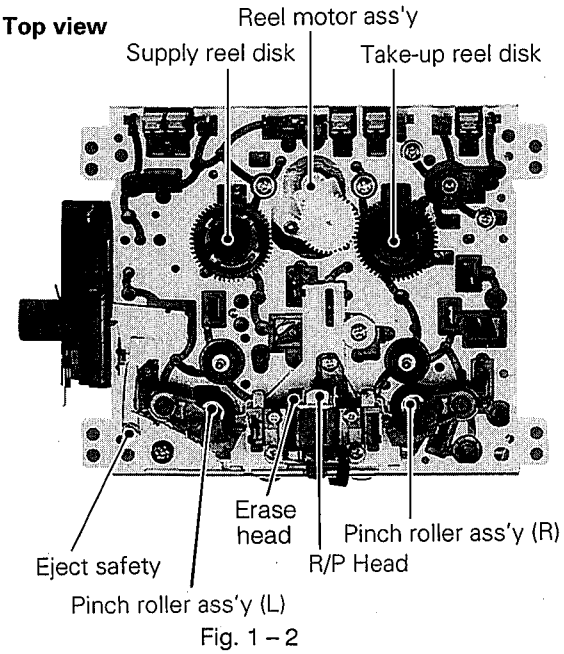



Fig. 1 – 2

### ◆ Bottom view

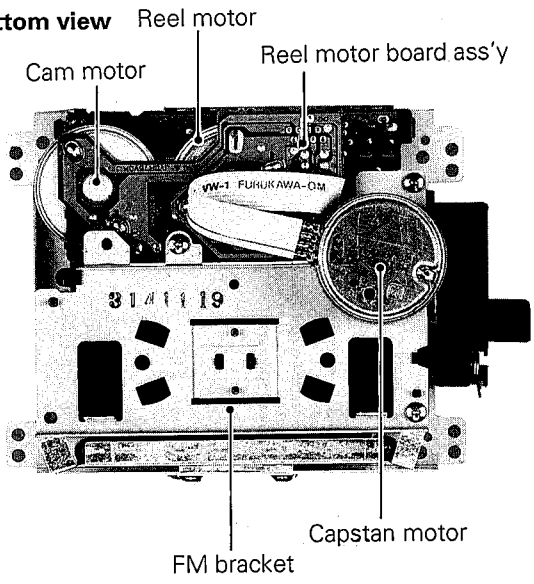



Fig. 1 – 3

# 2 Removal of main parts

## ■ Enclosure Section

### ◆ Top cover (Fig. 2 – 1)

1. Remove four screws ① retaining the top cover from both side.
2. Remove two screws ② retaining the top cover from the back side.
3. To remove the top cover ,slide in direction of allow and lift away (refer to Fig. 2 – 1).

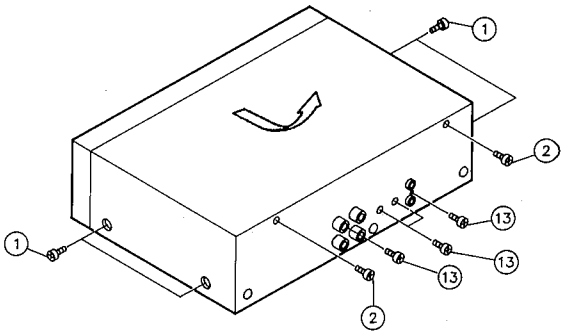
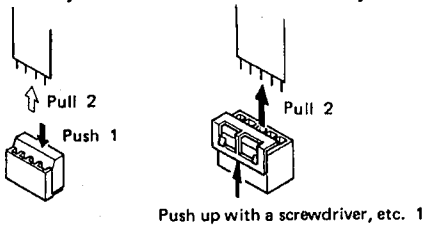



Fig. 2 – 1

### ◆ Front panel assembly (Fig. 2 – 2)

1. Remove the top cover as described in above.
2. Remove three screws ③ retaining the front panel ass'y from bottom side.
3. Release the front panel ass'y from two pawls in the front and bottom sides and draw it to the front side.
4. Disconnect all connectors between the mechanism ass'y, front panel ass'y and the main board ass'y.



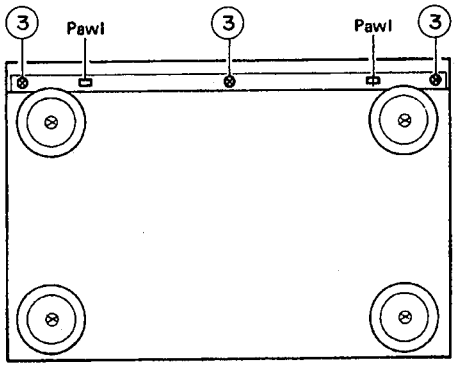




Fig. 2 – 2

### ◆ Mechanism assembly

★ Although the mechanism assembly can be removed without detaching the front panel ass'y, it is recommended to detach the front panel ass'y to do the work with ease.

1. Remove two screws ④ or two screws ⑤ from the corners of the mechanism. (Fig. 2 – 5)
2. Open the door and remove the mechanism ass'y.
   (At this time, door lock arm spring and door lock arm are removed together with.)
3. For moving the mechanism ass'y only, disconnect the following wirings.
   a) Mechanism ass'y side (Fig. 2 – 4)
      Top side connector of the cam switch board (CN2).
      Connector of the motor board (CN1). (Board to Board connector)
   b) Main board ass'y side (Fig. 2 – 3)
      Disconnects CN802 from Mecha control board, CN801 from Switch & Volume board ass'y, CN871 from Mic board ass'y and CN861 from H. Phone jack board ass'y.
      Disconnect wire coming from the head mount ass'y CN811 at deck A and CN815 at deck B.
      Remove two screws ⑥ and remove the two GND wires from Mechanism ass'y [A] and [B].

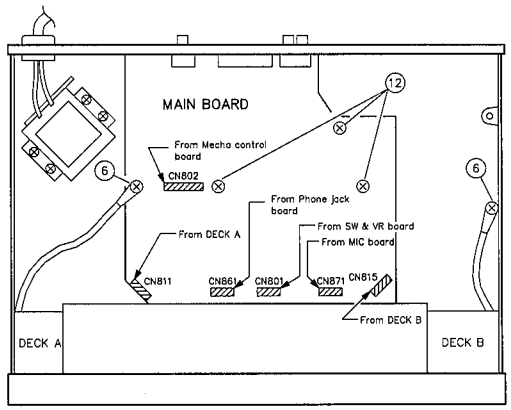



Fig. 2 – 3

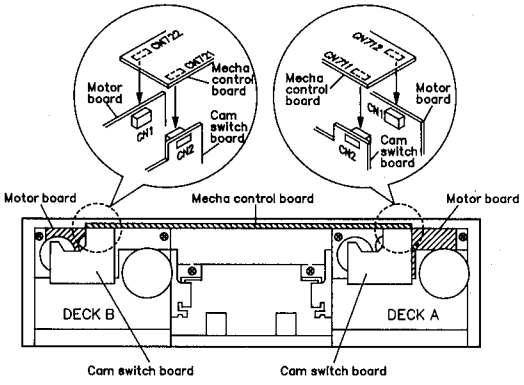



Fig. 2 – 4

### ◆Eject arm ass'y (Fig. 2 – 5)

1. Remove two screws ⑦ retaining the eject arm ass'y and pull it out.

### ◆Mechanism holder and door ass'y (Fig. 2 – 8)

1. Remove four screws ⑧ retaining the mechanism holder.
2. Remove the damper ass'y(for easy reassembling work). Insert an originary( – )screwdriver or the like in to the gap between the damper and the front panel to disengage the pawl , and draw the damper ass'y outwards.(see Fig 2 – 6)
3. Remove the arm shaft of the cassette holder (door ass'y)from the mechanism holder.(The door spring is engaged with the door side by the longer side.) (see Fig. 2 - 7)
4. Remove the eject spring from lock lever and mechanism ass'y. (see Fig. 2 - 7)

### ◆Switch & Volume board ass'y (Fig. 2 – 8)

1. After removing the mechanism holder, proceed to the following steps.
2. Pull out the INPUT volume knob.
3. Remove five screws ⑨ , one screw ⑭ and cap retaining the Switch & Volume P.C. board.
4. Lift the board right upwards to remove it since it is connected to the mechanism control key board with connector pins (CN603/CN604).
5. Disconnect CN602 coming from Mecha control board ass'y (CN702).

### ◆Headphone jack board ass'y and Mic jack board ass'y (Fig. 2 – 8)

1. After removing the Switch & Volume board ass'y, pull the H. Phone jack board ass'y and Mic jack board ass'y outwards while pushing it down toward the bottom side to remove it.

### ◆Key switch board ass'y (Fig. 2 – 8)

1. Remove one screw ⑩ (DeckA or B) retaining the board ass'y.
2. Do the same for the other side.

### ◆Main board ass'y (see Fig2 – 3,Fig 2 – 1)

1. Remove three screws ⑫ retaining the board.
2. Remove four screws ⑬ retaining the board to the rear panel.

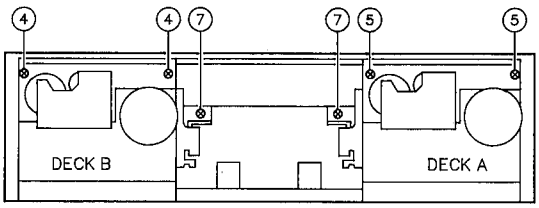



Fig. 2 – 5

How to remove damper

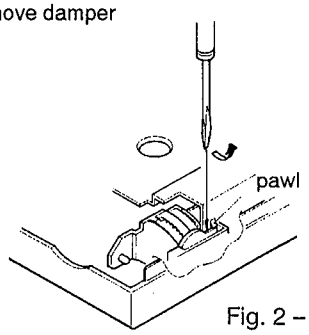



Fig. 2 – 6

How to engage the door and eject spring

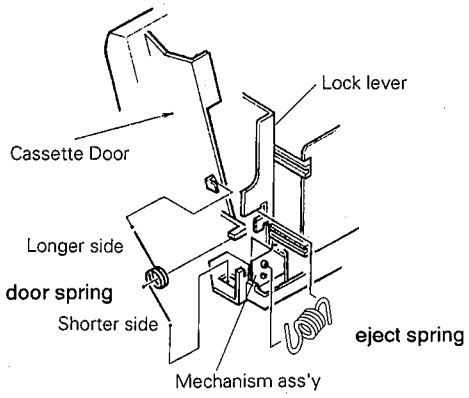



Fig. 2 – 7

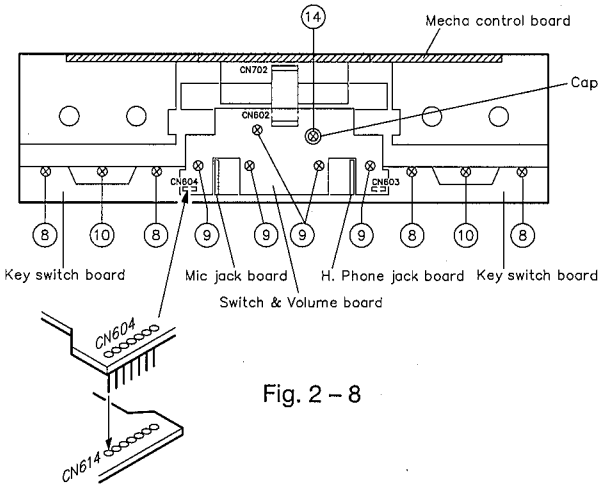



Fig. 2 – 8

● Reassembling procedure of the front panel ass'y

1. Attach the Key switch board ass'y to the panel with two screws.
2. Attach the mechanism holder to the front panel ass'y with four screws.
3. Put the door ass'y on the front panel.
4. Engage the door spring properly.
5. Install the damper. (Push the pawl side last to engage it.)
6. Install the mechanism ass'y.
7. Attach the Mecha control board ass'y to the panel with two screws.
8. Install the eject arm ass'y.
9. Attach the Switch & Volume board ass'y to the panel with five screws.
10. HooK the eject spring between lock lever and mechanism ass'y.

## ■ Cassette mechanism section

### ◆ Head mount assembly (Fig2-9,Fig2-10)

1. Remove the FPC holder from the mechanism frame in the direction indicated by the arrow (A).
2. Remove three screws ① retaining the head mount ass'y.

### ◆ Pinch roller assembly (Fig. 2 – 9, Fig. 2 – 11)

1. Remove the pinch roller and pinch roller spring by disengaging the pawl hooking it.
2. For reengaging the pinch roller and pinch roller spring, refer to Fig. 2 – 11.

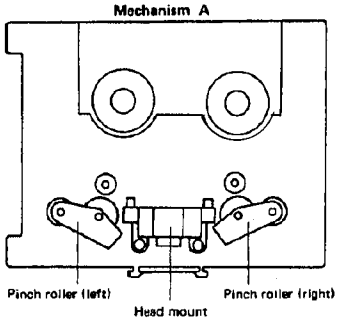



Fig. 2 – 9

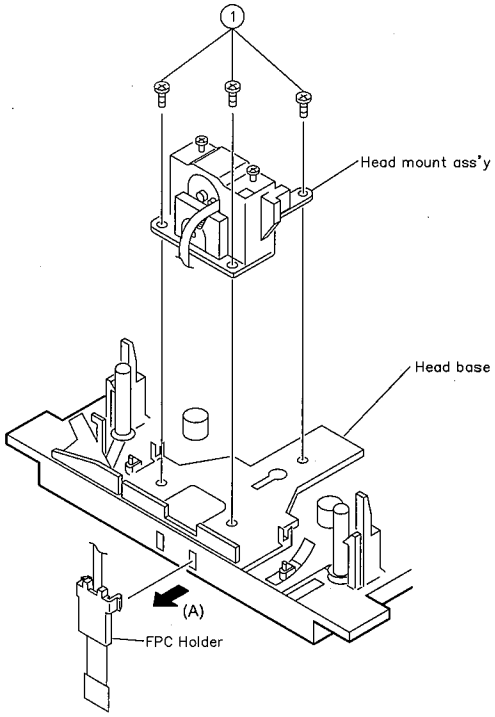



Fig. 2 – 10

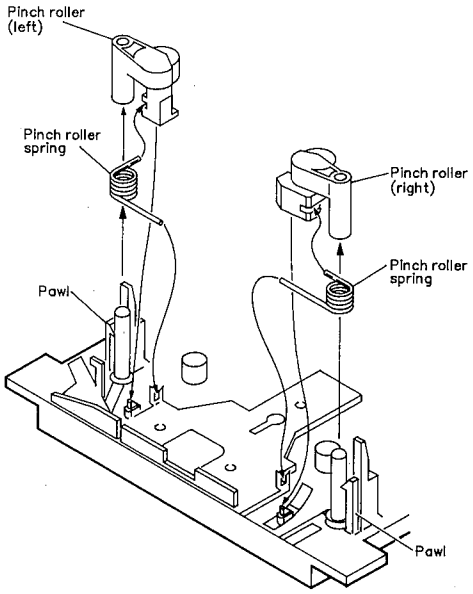



Fig. 2 – 11

### ◆FM bracket/Capstan motor assembly (Mechanism A and B)

1. Remove soldering of connector FM on Reel motor board. (Fig. 2 – 12)
2. Remove three screws ② and disengage two pawls, and then the FM bracket and the capstan belt can be removed. (Fig. 2 – 12, 2 – 13)
3. Remove two screws ③ retaining the capstan motor from the FM bracket. (Fig. 2 – 12)
4. For reengaging the capstan belt, refer to Fig. 2 – 13.

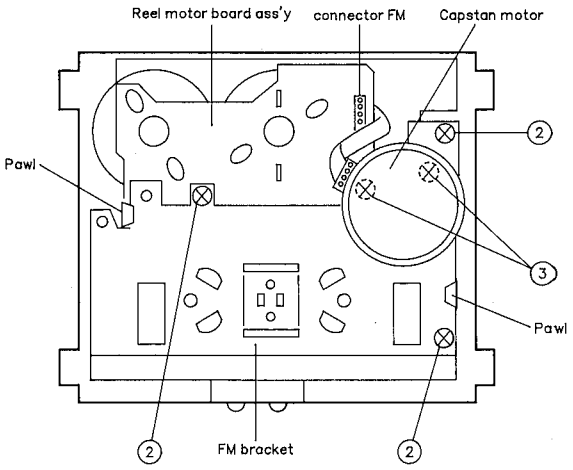



Fig. 2 – 12

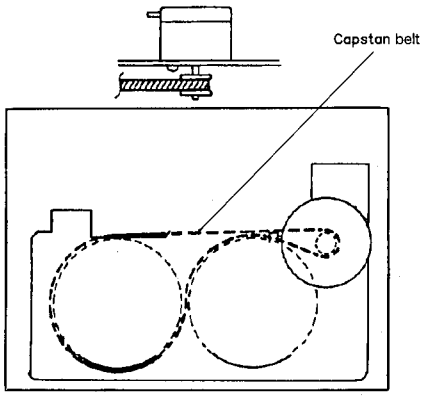



Fig. 2 – 13

### ◆Flywheel ass'y (Fig. 2 – 14)

1. Remove two screws ④ and remove the shield plate.
2. Pull up the Flywheel (L) and (R) and remove them.

### ◆Reel motor board (Fig. 2 – 14)

1. Remove four soldering of the Reel motor and Actuator motor and remove the Reel motor board.

### ◆Reel motor board (Fig. 2 – 15)

1. Remove two screws ⑤ from rear of chassis and remove the Reel motor ass'y toward upward.

### ◆Actuator motor ass'y (Fig. 2 – 15)

1. Remove two screws ⑥ from rear of chassis and remove the Actuator motor ass'y toward upward.

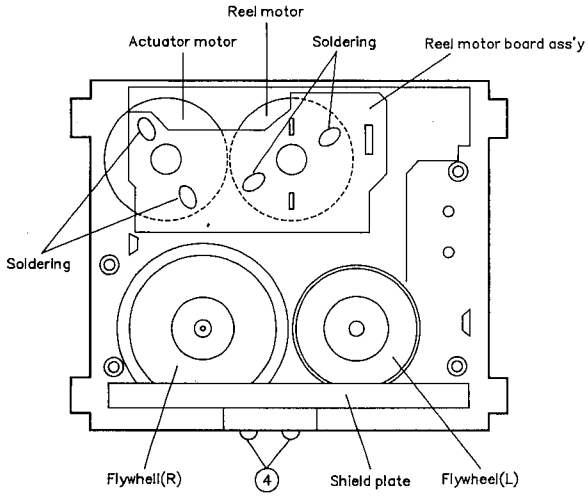



Fig. 2 – 14

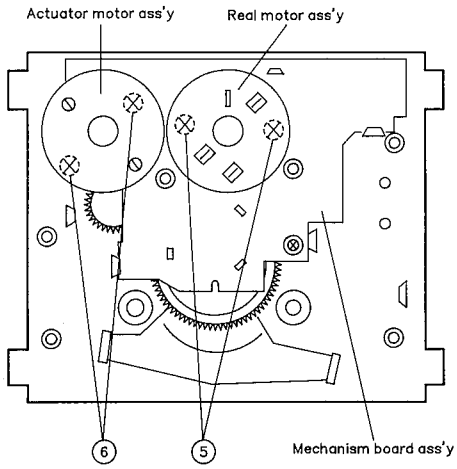



Fig. 2 – 15

◆**Mechanism board ass'y** (Fig. 2 – 16)

1. Remove one screw ⑦ retaining the board.
2. Release the Mechanism board from five pawls.
3. For gearing between the Mechanism board and Control cam, see the magnified illustration in a circle.

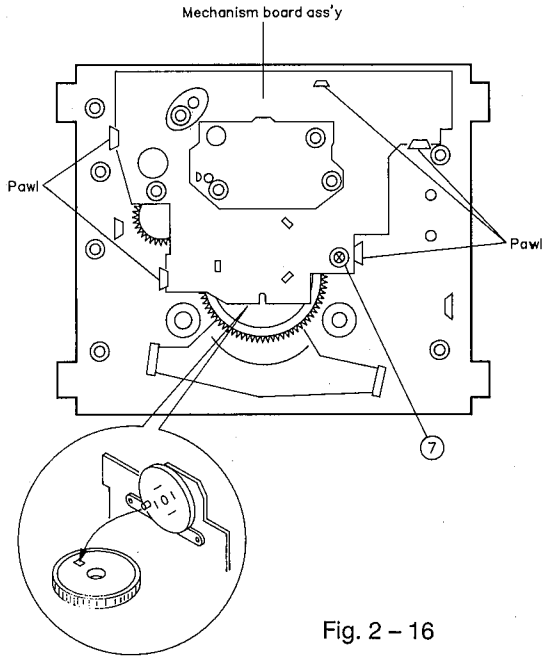



Fig. 2 – 16

◆**Control cam** (Fig. 2 – 17, 2 – 18)

1. Release the control cam from two pawls. (Fig. 2 – 17)
2. For assembling the control cam, fits ⓐ zone (groove) of control cam to ⓐ position of Pinch lever and ⓑ zone (groove) to ⓑ position of Head base shaft. (Fig. 2 – 17, 2 – 18)

◆**Actuator gear A and B (small)** (Fig. 2 – 17)

1. Release the actuator gear A (small) from one pawl and remove it toward upward.
2. Release the actuator gear B (small) from one pawl and remove it toward upward.

◆**Actuator gear (large)** (Fig. 2 – 17)

1. After removing the Control cam, actuator gear A (small) and actuator gear B (small), remove the Actuator gear (large).

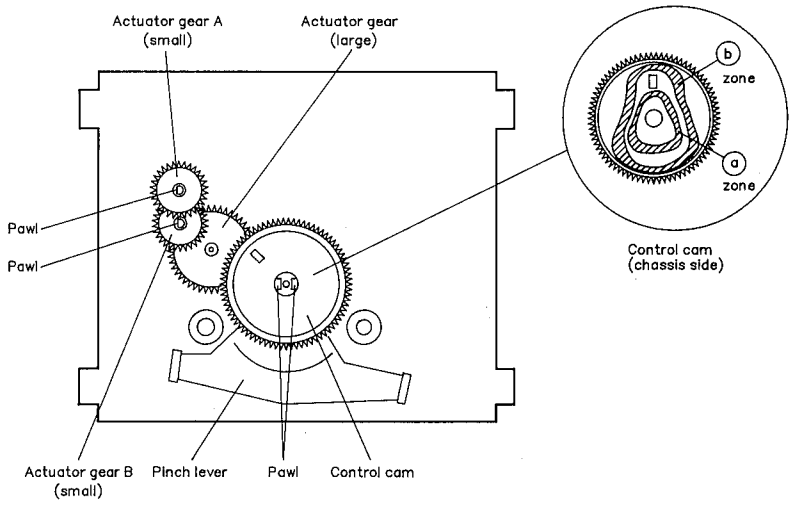



Fig. 2 – 17

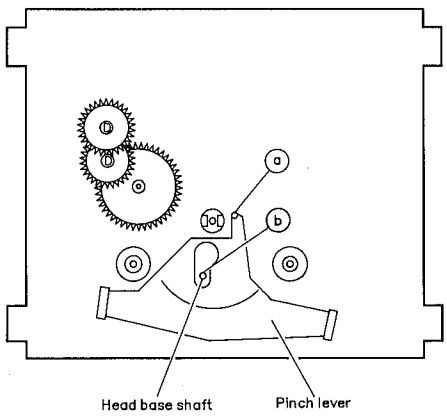



Fig. 2 – 18

# 3 Main Adjustment

## ◆Measuring instruments required for adjustment

(1) Low – frequency oscillator(oscillation frequency 50Hz – 20kHz, 0dB output with 600 Ω impedance )

(2) Attenutor(600 Ω impedance)

(3) Electronic voltmeter

(4) Standard tapes

VTT712 or VT712 (tape speed, wow and flutter meure-ment)

VTT727 or VT727 (400Hz reference level)

VT742 (63Hz, 1kHz, 12.5kHz)(play back frequency)

VTT704 or VT705 (12.5kHz)(azimuth)

TMT6447, TMT6448 (music scan)

(5) Recording reference tapes

AC-225 (Normal), AC-514 (TDK SA)($CrO_2$)

AC-713 (TDK MA)(Metal)

(6) 600 Ω resistors(for attenuator matching)

(7) Distortion meter(bandpass filter)

(8) Torque gauge (cassette) for CTG-N, TW2111, TW2121, TS2231 and TW2241, mechanism adjustments

(9) Wow & flutter gauge

(10) Freequency counter gauge

(11) M300 gauge

(12) Band pass filter

◆Power supply voltage

Set the line voltage selector switch to 240V/ 230V/ 220V/ 127V/ 120V/ 110V according to ⇄ your local voltage.

AC230V, 50 Hz :B/E/EN/G version

AC120V, 60Hz :C/J version

AC230/127/110V, 50/60Hz:U/UT version

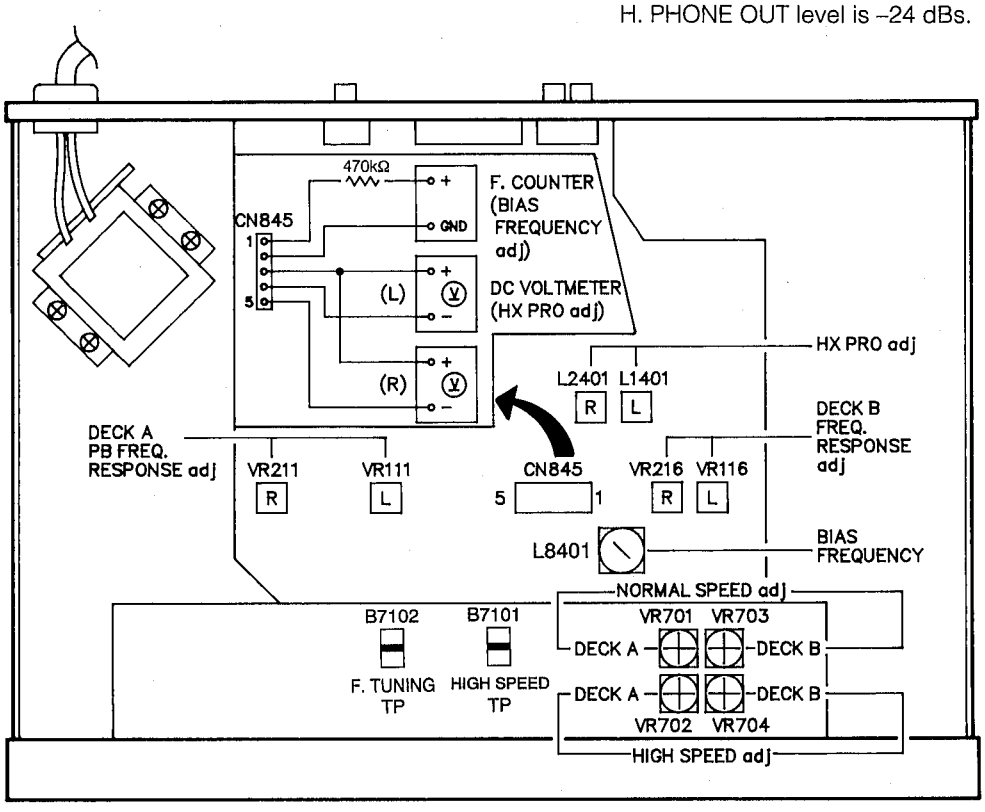
(13) Standard position of the switch and volume knob

| Switches and volume knobs | Setting position |
|---|---|
| INPUT LEVEL | : MAXIMUM |
| DOLBY NR | : OFF |
| REVERSE MODE | : ⇄ |
| PITCH CONTROL | : CENTER |
| MIC MIXING LEVEL | : MAXIMUM |
| COMPU CAL LED | : OFF |
| POWER | : ON (B/E/EN/G version) |

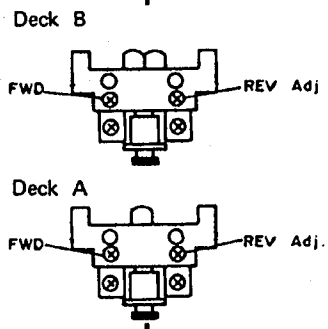
(14) Standerd level (0 dBs) is 0.775 Vunless other wise specified.

(15) The reference value of recording input level is LINE IN level of a signal whose LINE OUT level is –8 dBs and H. PHONE OUT level is –24 dBs.

## ◆Location of Adjustment



## ◆ Mechanism Adjstment

| Item | Conditions | Adjustment and Confirmation | Standad value | Adjust point |
|---|---|---|---|---|
| Adjusting Head azimuth | Test tape :VTT704 or VT705 (12.5kHz) | 1. Connect an electronic voltmeter to the LINE OUT terminals.<br>2. Play back the VTT704 (12.5kHz) test tape.<br>3. Adjust the head angle with the screw (FWD and REV) until the reading of the electronic voltmeter becomes maximum for both channels (phase difference must be "0".)<br>4. Repeat the adjustment in FWD and REV modes as well as for the decks A and B. | Maximum<br>  | Screws (FWD, REV) |
| Adjusting tape speed (motor speed) | 1. After adjustment of normal speed, then adjust high speed. Test tape: VTT712 or VT712 (3kHz)<br>2. For high speed adjustment, set the deck for play mode and shortcircuit between B7101 and GND.<br>3. Do not do anything while B7101 and GND are shortcircuited. | 1. Connect a frequency counter to the LINEOUT terminals.<br>2. Perform normal speed adjustment first, and then do high speed adjust- ment<br>3. Play back the VTT712 test tape.<br>4. Adjust for deck [A] :<br>Adjust VR701 for normal speed at 300Hz, and VR702 for high speed at 600Hz<br>Adjust for deck [B] :<br>Adjust VR703 for normal speed at 3000Hz, and VR704 for high speed at 6000Hz.<br>5. Difference in FWD and REV frequencies must be less than 48Hz. | Normal speed:<br>Deck [A],[B];3000 ± 15Hz<br>High speed :<br>Deck [A],[B];6000 ± 30Hz | Deck [A] :<br>Normal;VR701<br>High ; VR702<br>Deck [B];<br>Normal;VR703<br>High; VR704 |
| Checking wow and flutter | Test tape: VTT712 or VT712 (3kHz) | Connect a wow and flutter meter to LINE OUT terminals. Play back the VTT712 test tape. Check to see if the reading of the meter is within 0.17% (WRMS). | less than 0.17% (WRMS) | |
| Checking play back torque | Torque gauge: TW2111 (FWD) TW2121 (REV) | Employ a torque testing cassette tape (TW2111[FWD] / TW2121[REV] )for the checking, or remove the cassette cover and use a torque gauge. | 27 – 70 g·cm | |
| Checking back tension | Torque gauge: TW2111 (FWD) TW2121 (REV) | Employ a torque testing cassette tape (TW2111[FWD]/TW2121[REV]) for the checking, play the torque gauge and read the back tension value to confirm that the back tension is 1 – 4 g·cm | 1 – 4 g·cm | |
| Checking FF/REW time | Tape :AC-225 | Play back AC-225 tape in FF/REW mode, check that the FF/REW time during tape running from begin to end. | less than 120sec | |

## ◆ Compu-Calibration for F.CAL mode(automatically adjustment)

### ◆ F.CAL mode setting procedure

1. Short the F.TUNING TP and GND on mecha control board ass'y.
2. Press the POWER key while pressing the FF [ ►► ] key of deck A under the power standby mode.
   At the same time, [F.CAL] mode is displayed on the deck B counter of FL indicator.

NOTE: When Compu-Calibration is finished normally, [COMPU-CAL] LED light up and result number of calibration is displayed on the counter of FL indicator while 2 seconds.
If Compu-Calibration is finished abnormally, [COMPU-CAL] LED blinks and error number of calibration is displayed on the counter of FL indicator.
Then correct the error message and readjust the Compu-Calibration.

| Item | Condition | Adjustment |
|---|---|---|
| Level meter sensitivity adjustment | Mode:REC/PAUSE<br>at deck B<br>Test signal Line out level:<br>400Hz or 1kHz,-4dBs<br>Input:LINE IN(L and R) | 1. Supply a 400Hz or 1kHz signal to both L and R of LINE IN terminals at –4dBs levels correctly.<br>2. Confirm that difference level between left and right within 0.3dB.<br>3. Press the [COMPU-CAL] key of deck B,adjust the level meter sensitivity automatically. |
| Playback level adjustment at deck B | Direction:FWD<br>(deck B)<br>NR:OFF<br>Test tape:VTT-727<br>or VT727 | 1. Load the VTT-727 test tape to deck B.<br>2. Press the [PLAY] key of deck B and playing back the tape.<br>3. Press the [COMPU-CAL] key of deck B and adjust the playback level of deck B automatically. |
| Recording charactor adjustment (Bias and REC/PB sensitivity) at deck B | Direction:FWD(decks A and B)<br>Recrding tape:<br>AC-225 (normal)<br>AC-514 ($CrO_2$)<br>AC-713 (metal)<br>NR: OFF | 1. Load the AC-225 tape to deck B.<br>2. Press the [COMPU-CAL] key of deck B,start the recording charactor adjustment of deck B automatically.<br>After while about 30 seconds, adjustment is completed automatically.<br>While adjusting, confirm that all segment is displayed on FL indicator.<br>3. Load the AC-514 tape to deck B and adjusting as the same manner above step2.<br>Afer while about 20 seconds,adjustment is completed automatically.<br>4. Load the AC-713 tape to deck B and adjusting as the same manner above step2.<br>After while about 20 seconds,adjusting is completed automatically.<br>NOTE; When recording the each tapes, do not use while about 3 minutes range of tape start and end winding positions. |

### ◆ Explanation of Error Message

If following error messages are indicated on the FL indicator when adjusting the Conpu-Calibration,correct these abnormal conditions and readjust the Compu-Calibration.

1. In case the Level meter sensitivity adjustment.

| (Error No.) | (Contents of the message) |
|---|---|
| ER01 | No signal |
| ER02 | Over the adjustment range,too much large the input signal level |
| ER03 | Over the adjustment range,too much small the input signal level |

2. In case the Playback level adjustment.

| | |
|---|---|
| ER04 | No playback signal |
| ER05 | Over the adjustment range,too much large the playback signal |
| ER06 | Over the adjustment range,too much small the playback signal |

3. In case the Recording signal adjustment.

(1) For Lch

| | |
|---|---|
| ER12 | No 400Hz test signal for recording |
| ER13 | No 12.5kHz test signal for recording |
| ER14 | No playback signal (Do not recorded) |
| ER15 | Can not find the recording start position |
| ER16 | Over the adjustment range of 400Hz playback signal level,too much large 400Hz playback signal |
| ER17 | Over the adjustment range of 400Hz playback signal level,too much small 400Hz playback signal |
| ER18 | Too much large 12.5kHz playback signal level compare with 400Hz signal |
| ER19 | Too much small 12.5kHz playback signal level compare with 400Hz signal |

(2) For Rch

| | |
|---|---|
| ER22 | No 400Hz test signal for recording |
| ER23 | No 12.5kHz test signal for recording |
| ER24 | No playback signal (Do not recorded) |
| ER25 | Can not find the recording start position |
| ER26 | Over the adjustment range of 400Hz playback signal level,too much large 400Hz playback signal |
| ER27 | Over the adjustment range of 400Hz playback signal level,too much small 400Hz playback signal |
| ER28 | Too much large 12.5kHz playback signal level compare with 400Hz signal |
| ER29 | Too much small 12.5kHz playback signal level compare with 400Hz signal |

(3) For Lch and Rch

| | |
|---|---|
| ER30 | Compu-Calibration of AC-514 adjustment is started before adjustment of AC-225 is not complete finished |
| ER31 | Compu-Calibration of AC-713 adjustment is started before adjustment of AC-225 is not complete finished |
| ER32 | During adjustment of recording response, too much large difference level of 400Hz between left and right channels. |

### ◆ Monitor of adjusting values

In F. CAL mode, any adjusting data (DAC data) are indicated by the following key operations during STOP mode.

① DECK A PLAY — During playback the deck A, setting data of input volume DAC at Lch are displayed on the counter to lower 2 digits of deck A FL indicator and at Rch are displayed on the counter to lower 2 digits of deck B FL indicator.

② DECK B PLAY — During playback the deck B, setting data of input volume DAC at Lch are displayed on the counter to lower 2 digits of deck A FL indicator and at Rch are displayed on the counter to lower 2 digits of deck B FL indicator.

③ DECK B REC — During loaded tape type of F. CAL mode, setting data of bias DAC at Lch are displayed on the counter to upper 2 digits of deck A FL indicator and at Rch are displayed on the counter to upper 2 digits of deck B FL indicator. And setting data of equalizer volume DAC at Lch are displayed on the counter to lower 2 digits of deck A FL indicator and at Rch are displayed on the counter to lower 2 digits of deck B FL indicator.

④ DECK B PAUSE — During loaded tape type of user calibrating, setting data of bias DAC at Lch are displayed on the counter to upper 2 digit of deck A FL indicator and at Rch are displayed on the counter to upper 2 digits of deck B FL indicator. And setting data of equalizer volume DAC at Lch are displayed on the counter to lower 2 digits of deck A FL indicator and at Rch are displayed on the counter to lower 2 digits of deck B FL indicator. And more metal tape loading, recording equalizer steps are displayed by using +2(0), +4(1), +6(2) and +8(3) on the Rch level meter.

⑤ DECK B STOP — Adjusting data of level meter sensitivity at Lch are displayed on the counter to lower 2 digits of deck A FL indicator and at Rch are displayed on the counter to lower 2 digits of deck B FL indicator.

### ◆ Special operation

- In F. CAL mode.

① B. REC +B. COUNTER RESET — Clear the recording character data of user setting data (user tape data) in normal mode.

NOTE: This operation should be doing before shipping the unit.

② B. STOP +B. COUNTER RESET — Clear the all data of F. CAL mode.

NOTE: This operation should be doing in such as head replacement or mechanism replacement.

- In normal mode.

① B. REC +B. COUNTER RESET — Clear the recording character data of user setting data (user tape data) in which loaded tape of normal mode.

### ◆ Checking

Press the POWER key during normal mode.
In F. CAL mode, press the POWER key once and set the stand by mode and press the POWER key again then set to normal mode.
In normal mode and powered up the unit, if compu-calibration of three items as shown on page 20 is not finished, following error message are displayed on FL indicator.
At this time, adjust the compu-calibration on page 20 in F. CAL mode.

① Error Message — [F CAL] is blink on the counter of deck A FL indicator and [ERR_] is blink on the counter of deck B FL indicator. (_portion is blank)

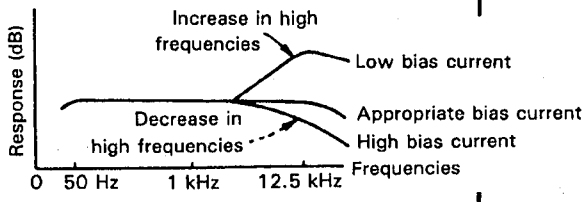
② Unfinished Compu-Calibration — At this time, press COMPU-CAL key and displayed unfinished items with blinking as follows:

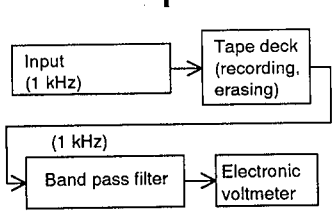
| Error Message | Unfinished Item |
|---|---|
| Blink the 0 dB segment on level meter | Level meter sensitivity adjustment |
| Blink the –30 dB segment on level meter | Playback level adjustment |
| ER51 on deck B counter | Recording character adjustment (AC-225) |
| ER52 on deck B counter | Recording character adjustment (AC-514) |
| ER53 on deck B counter | Recording character adjustment (AC-713) |

## ◆ Electrical Adjustment Procedure

| Item | Check and Adjustment | | | |
|---|---|---|---|---|
| 1 Cheking DOLBY circuit (Rec.mode) (BIAS-CUT) | | | Input signal (Frequency, level) | Output raise value,deviation value |
| | Signal input: LINE IN Cal.level: 400Hz, – 8dBs<br>Output terminal TP : NR IC831 (53) &(8) pin. | DOLBY B (Rec) | 1kHz, cal. – 40dB | +5.7 dB ± 2 dB |
| | | | 5kHz, Cal. – 20dB | +3.5dB ± 1.5 dB |
| | | | 1kHz, Cal. | 0 dB $\pm \frac{0.5}{1.0}$ dB |
| | | DOLBY C (Rec) | 1kHz, Cal. – 40 | +16.2 dB $\pm \frac{3}{2}$ dB |
| | | | 5kHz, Cal. – 20 | +2.9 dB ± 2.5 dB |
| | | | 1kHz, Cal. | 0 dB ± 1 dB |

| Item | Conditions | Adjustment and Confirmation | Standard | Adjusting |
|---|---|---|---|---|
| *2 Play back level check | Test tape<br>VTT727 or VT727 : 400Hz | Play back VTT727 in FWD mode. Check that the level at LINE OUT is –4.5 dBs ± 1 dB.<br>Difference between Lch and Rch must be less than 1 dB at LINE OUT. | LINE OUT<br>–4.5 dBs ± 1dB<br>Phone Out<br>–20.5 dBs<br>± 2 dB | |
| *3 Playback frequency response adjustment | Test tape<br>VT742<br>(63Hz, 1kHz, 12.5kHz) | Play back VT742 test tape, and adjust VR116, VR216 (deck [B]) and VR111, VR211 (deck [A]) so that deviation of 12.5 kHz to that of 1 kHz is 0 ± 0.5 dB (deck [A] and deck [B]).<br>Then, play back VT742 test tape to confirm that deviation of 63 Hz to 1kHz is +2 ± 3 dB. | with 12.5kHz as reference,<br>0 ± 0.5 dB (deck [A]) and<br>0 ± 0.5 dB (deck [B]) at 1 kHz<br>63 Hz (check): +2 ± 3 dB | Deck [B]<br>L: VR116<br>R: VR216<br>Deck [A]<br>L: VR111<br>R: VR211 |
| *4 Bias frequency adjustment<br>NOTE:<br>This adjustment should be doing before Compu-Calibration on page 20. | Frequency counter<br>TP: CN845 pin 1<br>Tape : Metal<br>Mode: REC<br>Frequency counter Input impedance: more than 470 kΩ<br>(see page 18) | Connect frequency counter to the pin 1 of CN845 and adjust L8401 so that the counter reads 95 kHz. | 95 kHz ± 1 kHz | Deck [B]<br>L8401 |
| *5 Slave oscillation (HX PRO) adjustment | DC.Voltmeter<br>TP: CN845<br>Lch (pin 3 – 4)<br>Rch (pin 3 – 5) | This step must be performed after the bias frequency adjustment.<br>Load a metal tape and set the deck to the recording mode.<br>Adjust L1401 and L2401 to minimize respective DC voltages of CN845 (pin 3 – 4) at Lch and (pin 3 – 5) at Rch. | Minimum | Deck [B]<br>L : L1401<br>R : L2401 |

| Item | Conditions | Adjustment and Confirmation | Standard | Adjusting |
|---|---|---|---|---|
| 6 Checking recording bias current (Value appering here are just for reference) | Measuring point: Both ends of 100 Ω resistor connected to the R/P head terminal | Connect 100 Ω resistor to the R/P head in series, and measure voltage at both ends of the resistor to check to see if measured voltage meets the following requirements on both channels.<br>• In recording with metal tape, the bias current is 1100 μA (1.1 mA).<br>• In recording with $CrO_2$ tape, the bias current is 780 μA (0.78 mA).<br>• In recording with normal tape, the bias current is 480 μA (0.48 mA). | Reference values<br>Metal tape:<br>1100 μA<br>$CrO_2$ tape:<br>780 μA<br>Normal tape:<br>480 μA | |
| 7 Input sensitivity level check | | 1. Supply a 1kHz signal to the LINE IN terminals at –20dBs, confirm that LINE OUT level is –8dBs.<br>2. Supply a 1 kHz signal to the MIC input terminals at –66 dBs, confirm that LINE OUT level is –8 dBs.<br>3. Confirm that difference level between left and right within 2 dB at LINE IN terminals and within 3 dB at MIC terminals. | LINE IN<br>: –20dBs<br>± 2 dB<br>MIC<br>: –66 dBs<br>± 3 dB | |
| *8 REC/PB frequency response check | LINE INPUT level :<br>Ref. –20 dB<br>(–40 dBs ± 2 dB)<br>MIC INPUT level :<br>Ref. –20 dB<br>(–86 dBs ± 2 dB)<br>NR switch : OFF | This step must be performed after the slave oscillation adjustment.<br>Record the 1 kHz and 12.5 kHz signals at the level of – 20 dB (20 dB lower than the reference level).<br>Playing back the recorded signals, check that the level of the 12.5 kHz signal is 0 ± 2 dB to the level of the 1 kHz signal.<br>As the same manner as above, check that the level of 63 Hz signal is 0 ± 3 dB to the level of the 1 kHz signal.<br>  | 12.5 kHz level:<br>0 ± 2 dB<br>63 Hz level:<br>0 ±3 dB<br>higher than<br>the 1kHz level. | |
| 9 Recording/ playback sensitivity check | NR switch : OFF | 1. Supply a 400Hz signal to the LINE IN terminals record a 400Hz signal at reference level of –20dB.<br>2. Confirm that REC indicator should turn on when LINE OUT level is –28dBs during recording. | Normal, Chrome, Metal:<br>–28dBs<br>±1 dB | |

| Item | Conditions | Adjustment and Confirmation | Standard | Adjusting |
|---|---|---|---|---|
| 10 Maximum output level check | | Supply 1 kHz signel to the LINE IN terminal in the Rec. monitoring mode, and read non-clipped signal level at the LINE IN terminal | LINE OUT: more than 5 dBs PHONES OUT: more than – 16dBs | |
| 11 Checking record/ playback distortion | | 1. Record a 1 kHz, –20 dB signal to LINE IN terminals.<br>2. Play back the recorded part, Check the output with a distortion meter to see if the value conforms to the standard value. | Nornal: Less than 2%<br>CrO2/Metal: Less than 3% | |
| 12 Checking signal to noise ratio recording playback | | 1. Record a 1 kHz, –20 dB signel, Stop the input by disconnecting from the terminal to perform non-signal recording.<br>2. Play back the recorded part.Measure the – 8 dBs recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value. | Normal, More than 40 dB<br>Metal, $CrO_2$; More than 41 dB | |
| 13 Checking erasing coefficient | | 1. Apply a 1 kHz, +20 dB signal to the LINE IN terminals.<br>2. Perform recording with the signal enhaned by 20 dB.<br>3. Erase a part of the recording.<br>4. Measure the output difference between the erased part and non- erased part to compare with an electronic voltmeter.<br>For the measurement using a metal tape, connect a band pass filter between the deck and the electronic voltmeter. | More than 55 dB<br>  | |
| 14 Checking MPX filter effect | Signal input: LINE IN<br>Input LEVEL: Maximum | 1. Connect an electronic voltmeter and oscilloscope to the LINE OUT terminals.<br>2. Set the INPUT volume to the maximum position.<br>3. Set the NR switch to on and supply 1 kHz and 19 kHz signals reference level to the LINE IN terminals respectively and record them.<br>4. While playing back the 1 kHz and 19 kHz signal respectively, confirm that level difference between 19kHz signal to 1 kHz signal is more than 30 dB. | 19 kHz level: –30 dB (including 18.99 ~ 19.01 kHz) lower than 1 kHz signal | |

<table>
<tr><th>Item</th><th>Conditions</th><th>Adjustment and Confirmation</th><th>Standard</th><th>Adjusting</th></tr>
<tr><td>15 Checking peak indicator Calibration</td><td>Operation mode:<br>REC<br>Input frequency:1 kHz<br>Signal input:LINE IN<br>LINE OUT:–4 dBs<br>(Indicator reads at 0 position)</td><td>1. Connect an electronic voltmeter to the LINE OUT terminals.<br>2. Supply the 1 kHz reference signal (–4 dBs) to the LINE IN terminals.<br>3. While rising the input signal level gradually, check the signal level at the LINE OUT so that each peak indicator is turned on with the output level specified on the right.</td><td colspan="2"><table><tr><th>Indicator</th><th>Signal level (LINE OUT)</th></tr><tr><td>– 30</td><td>– 34 dBs ± 5 dB</td></tr><tr><td>– 20</td><td>– 24 dBs ± 4 dB</td></tr><tr><td>– 15</td><td>– 19 dBs ± 3 dB</td></tr><tr><td>– 12</td><td>– 16 dBs ± 3 dB</td></tr><tr><td>– 10</td><td>– 14 dBs ± 2 dB</td></tr><tr><td>– 8</td><td>– 12 dBs ± 2 dB</td></tr><tr><td>– 6</td><td>– 10 dBs ± 2 dB</td></tr><tr><td>– 4</td><td>–8 dBs ± 1 dB</td></tr><tr><td>– 2</td><td>– 6 dBs ± 2 dB</td></tr><tr><td>0</td><td>– 4 dBs ± 2 dB</td></tr><tr><td>+ 2</td><td>– 2 dBs ± 2 dB</td></tr><tr><td>+ 4</td><td>0 dBs ± 2 dB</td></tr><tr><td>+ 6</td><td>+ 2 dBs ± 2 dB</td></tr><tr><td>+ 8</td><td>+ 4 dBs ± 2 dB</td></tr></table></td></tr>
<tr><td>16 Checking music scan in FWD and REV mode</td><td>Test tape:<br>TMT-6448 (FWD)<br>TMT-6447 (REV)</td><td>1. Playing back the TMT-6448 test tape by using nearly start winding position of the tape at FWD mode and load the tape at more than 15 seconds.<br>Confirm that music scan should not works to scan select.<br>2. Playing back the TMT-6447 test tape by using nearly end winding position of the tape at REV mode.<br>Confirm that music scan should works to scan select.</td><td></td><td></td></tr>
</table>

# 4 Wiring Connections

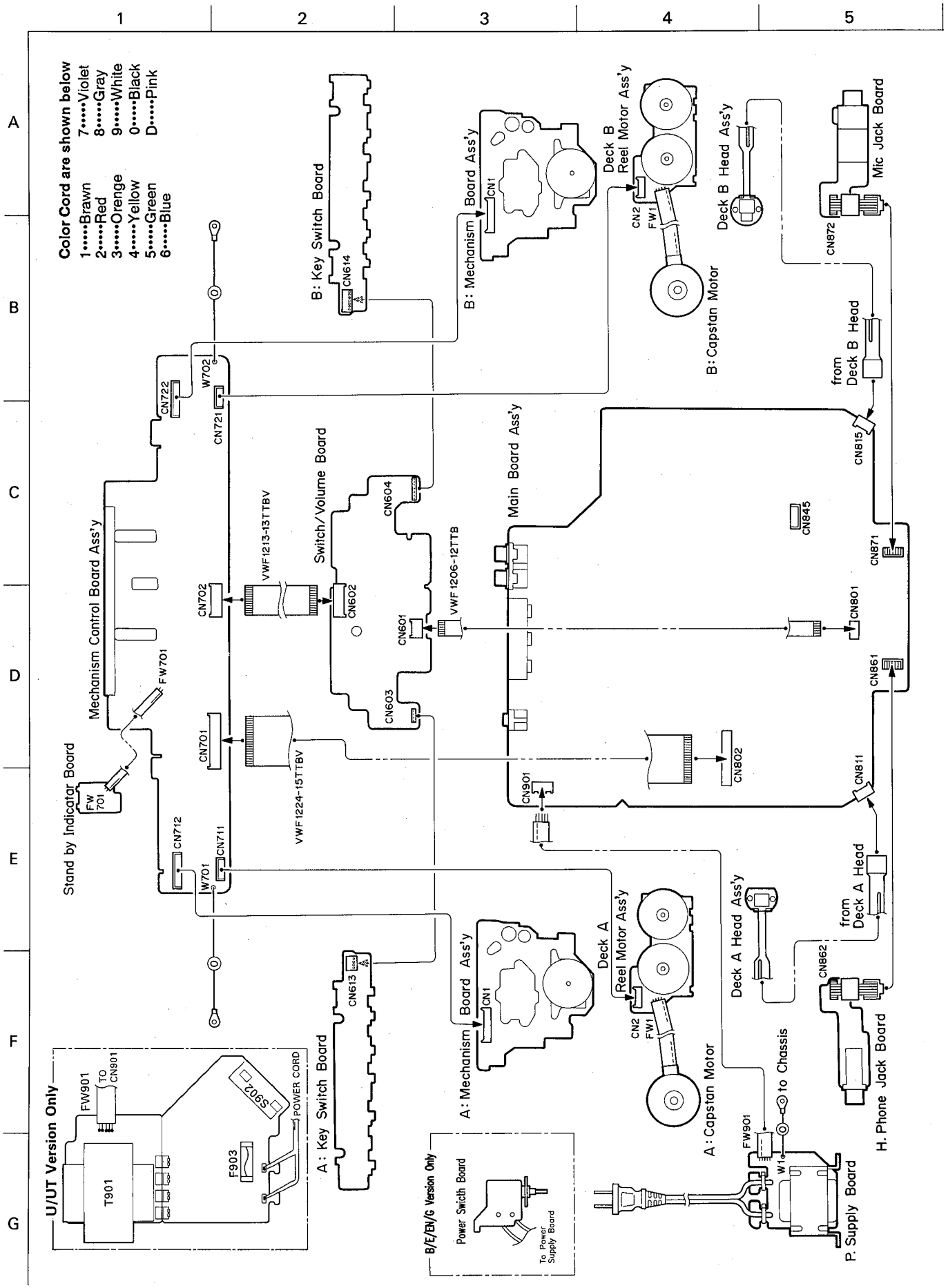



Fig 4 – 1

# 5 Block Diagram

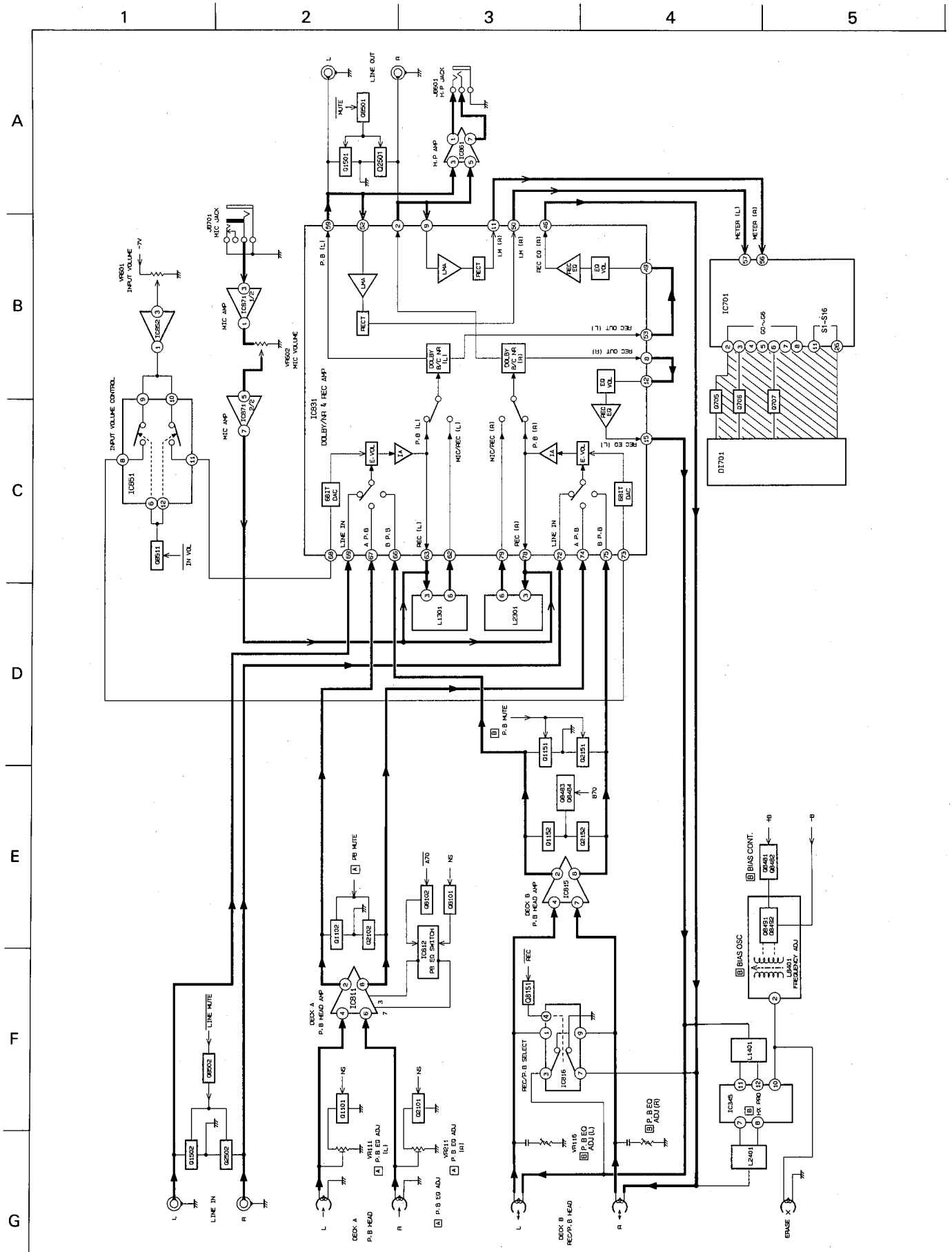
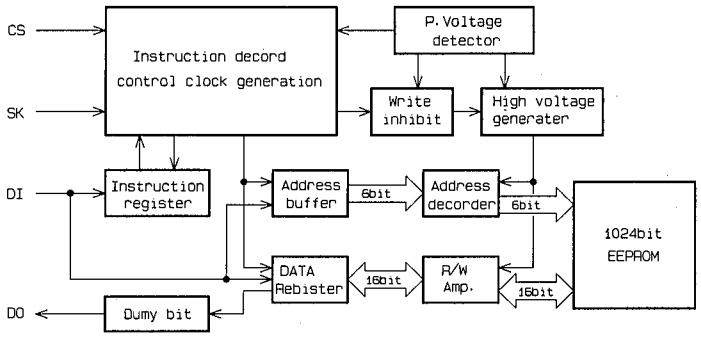


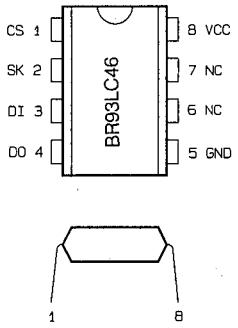
Fig 5 – 1

# 6 IC Blook Diagrams

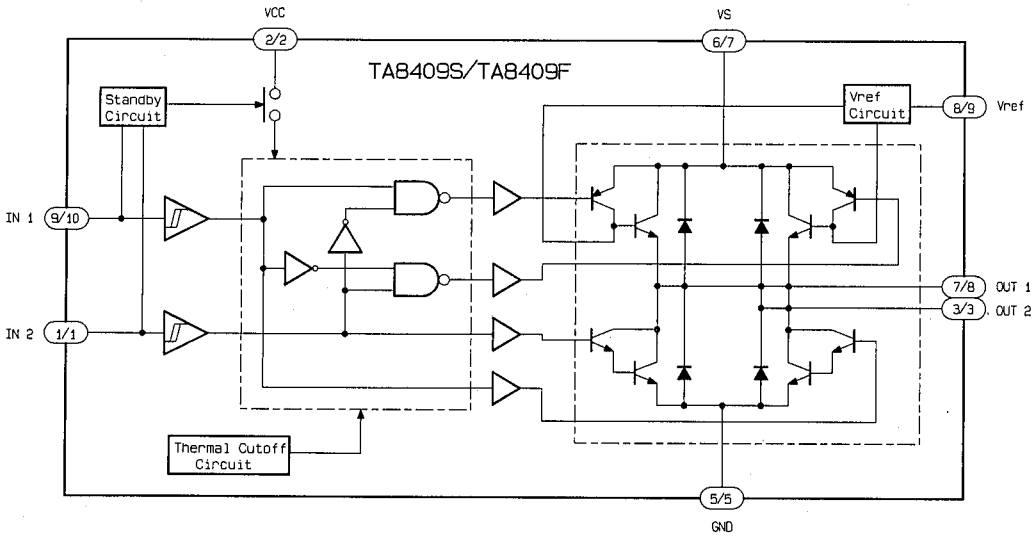
## ◆ IC703 (BR93LC46)

BR93LC46

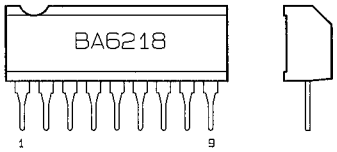


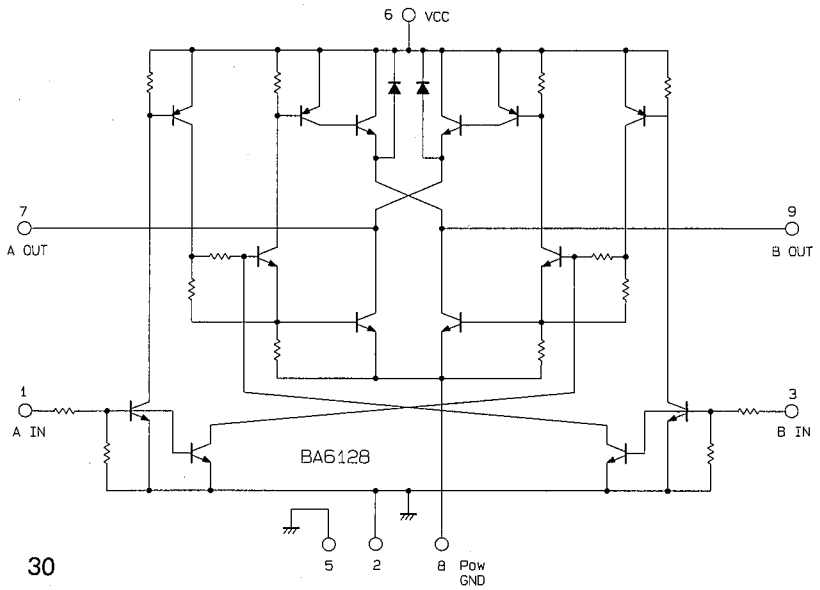




## ◆ IC733/IC734 (TA8409S)

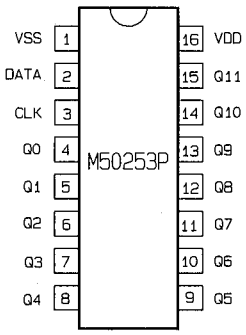


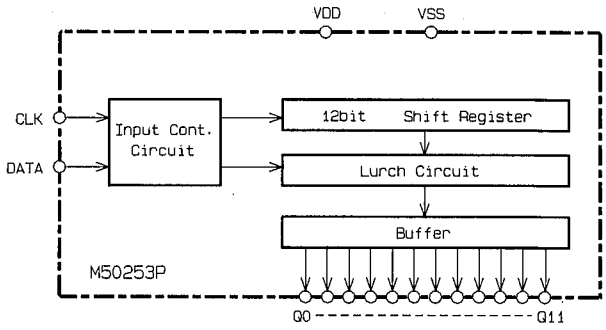

## ◆ IC731/IC732 (BA6128)




## ◆ IC891/IC702 (M50253P)



## ■ IC PIN FUNCTION

### ◆ IC701 (MB89145V2P-121 OR MB89145V2P-116) : MAIN MICOM

| PIN NO. | SIGNAL NAME | IN/OUT | DESCRIPTION | |
|---|---|---|---|---|
| 1 | DCS OUT | OUT | DCS SIGNAL OUTPUT | |
| 2 ~ 8 | G0 ~ G6 | OUT | FL GRID & DYNAMIC SCAN INPUT SELECT OUTPUT | |
| 9 | A – RESET | OUT | IC831 IC RESET OUTPUT | |
| 10 | VFDP | IN | –24 V (PULL – DOWN RESISTOR VOLTAGE INPUT) | |
| 11~ 26 | S16 ~ S1 | OUT | FL SEGMENT OUTPUT | |
| 27 | 1 – CLK | OUT | CLOCK OUTPUT (PORT EXPANDER-1) IC891 | |
| 28 | $\overline{\text{RESET}}$ | IN/OUT | RESET INPUT (L – RESET) | |
| 29 | MODA | IN | L LEVEL SETTLE | |
| 30 | X0 | – | MICOM SYSTEM CLOCK (8MHz) | |
| 31 | X1 | – | MICOM SYSTEM CLOCK (8MHz) | |
| 32 | Vss | – | GND | |
| 33 | DATA4 | IN | DYNAMIC SCAN SIGNAL INPUT | |
| 34 | DATA3 | IN | DYNAMIC SCAN SIGNAL INPUT | |
| 35 | 1 – DATA | OUT | DATA OUTPUT (PORT EXPANDER-1) IC891 | |
| 36 | A – DATA | OUT | SERIAL DATA OUTPUT (IC831 IC) | |
| 37 | A – CLK | OUT | SERIAL DATA TRANSMIT CLOCK OUTPUT (IC831 IC) | |
| 38 | A – STB | OUT | SERIAL DATA TRANSMIT STROBE OUTPUT (IC831 IC) | |
| 39 | OSC | IN/OUT | OSC WAVE OUTPUT (AUTO TUNING (HIZ, H, L) | |
| 40 | CS | OUT | CHIP SELECT OUTPUT (IC703) | |
| 41 | DO | OUT | DATA OUTPUT | |
| 42 | DI | IN | DATA INPUT | |
| 43 | SK | IN | CLOCK INPUT | |
| 44 | REMOCON | IN | NC | |
| 45 | 2 – CLK | OUT | CLOCK OUTPUT (PORT EXPANDER-2) IC702 | |
| 46 | 2 – DATA | OUT | DATA OUTPUT (PORT EXPANDER-2) IC702 | |
| 47 | DATA2 | IN | DYNAMIC SCAN SIGNAL INPUT | |
| 48 | DATA1 | IN | DYNAMIC SCAN SIGNAL INPUT | |
| 49 | DATA0 | IN | DYNAMIC SCAN SIGNAL INPUT | |
| 50 | A. FCAM | OUT | A MECHA CAM MOTOR OUTPUT (F, S → F, P : H) | *1 |
| 51 | A. RCAM | OUT | A MECHA CAM MOTOR OUTPUT (R, S → R, P : H) | *2 |
| 52 | B. FCAM | OUT | B MECHA CAM MOTOR OUTPUT (F, S → F, P : H) | *1 |
| 53 | B. RCAM | OUT | B MECHA CAM MOTOR OUTPUT (R, S → R, P : H) | *2 |
| 54 | B. FREEL | OUT | B MECHA REEL MOTOR OUTPUT (L → R : H) | *3 |
| 55 | B. RREEL | OUT | B MECHA REEL MOTOR OUTPUT (R → L : H) | *3 |
| 56 | METER-R | IN | R CH LEVEL METER SIGNAL (ANALOG INPUT) | |
| 57 | METER-L | IN | L CH LEVEL METER SIGNAL (ANALOG INPUT) | |
| 58 | KEY3 | IN | B MECHA OP SW INPUT (ANALOG INPUT) | |
| 59 | KEY2 | IN | B MECHA OP SW INPUT (ANALOG INPUT) | |
| 60 | KEY1 | IN | A MECHA OP SW INPUT (ANALOG INPUT) | |
| 61 | KEY0 | IN | A MECHA OP SW INPUT (ANALOG INPUT) | |
| 62 | A Vss | – | GND (A/D CONVERTER) | |
| 63 | A Vcc | IN | 5.2 V (A/D CONVERTER) | |
| 64 | Vcc | IN | 5.2 V | |

NOTE: *1 F. S – F. STOP, F. P – F. PLAY
*2 R. S – R. STOP, R. P – R. PLAY
*3 L – LEFT R – RIGHT

◆ **IC891 (M50253P) : PORT EXPANDER-1**

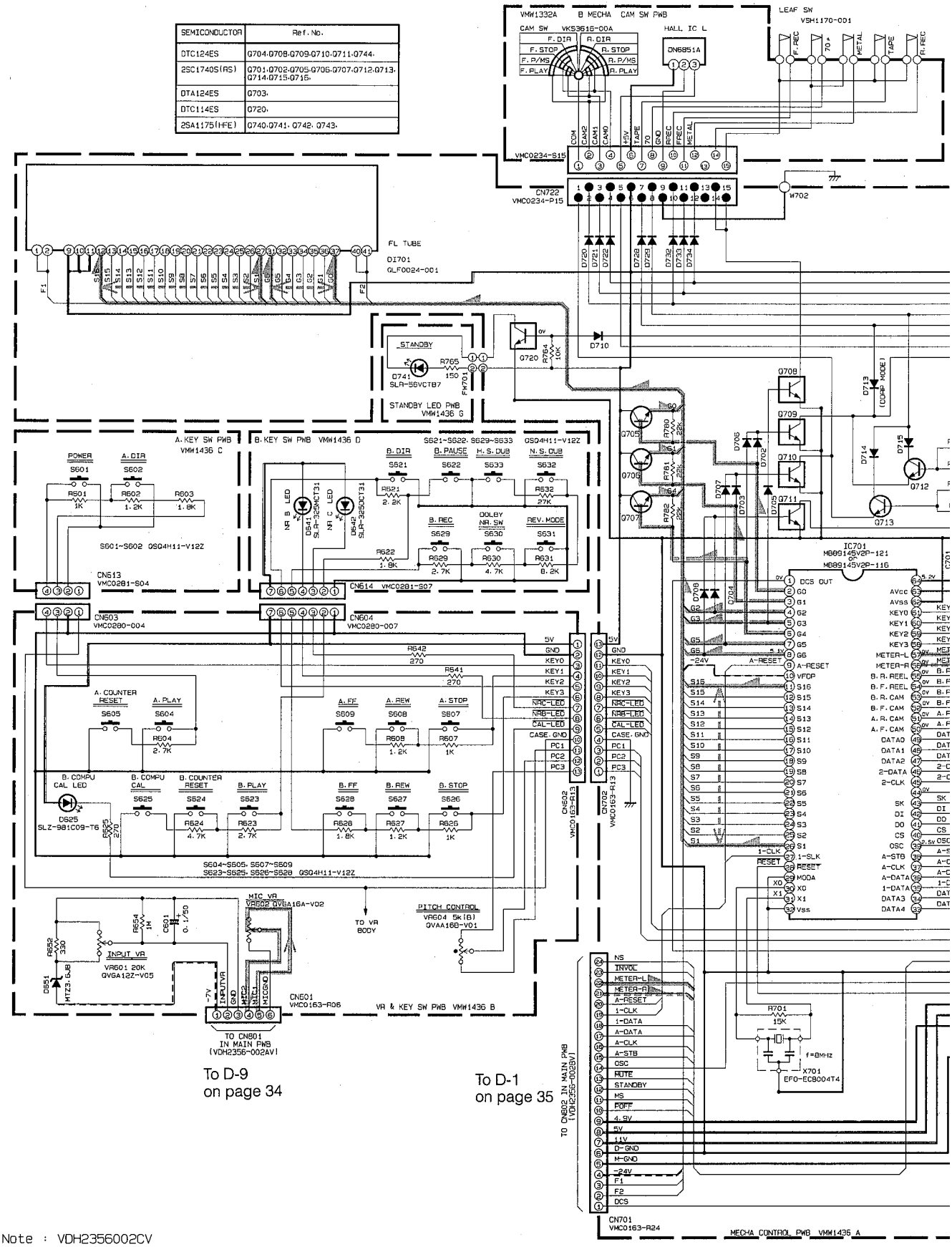
| PIN NO. | SIGNAL NAME | IN/OUT | DESCRIPTION |
|---|---|---|---|
| 1 | Vss | – | GND |
| 2 | DATA | IN | SERIAL DATA INPUT (IC701) |
| 3 | CLK | IN | SERIAL CLOCK INPUT (IC701) |
| 4 | A70 | OUT | A MECHA TAPE (70 μ) L (TAPE IN OR NOT) |
| 5 | B70 | OUT | B MECHA TAPE (70 μ) H (TAPE IN OR NOT) |
| 6 | $\overline{\text{REC}}$ | OUT | B MECHA HEAD R/P CONTROL OUTPUT (REC MODE: L) |
| 7 | APBMUTE | OUT | A MECHA PLAYBACK SIGNAL MUTE CONTROL OUTPUT (MUTE: H) (PB: L, OTHER: H) |
| 8 | BPBMUTE | OUT | B MECHA PLAYBACK SIGNAL MUTE CONTROL OUTPUT (MUTE: H) (PB: L, OTHER: H) |
| 9 | $\overline{\text{400}}$/12.5 K | OUT | 400 Hz OSC WAVE OUTPUT: L (AUTO TUNING MODE) |
| 10 | CAL | OUT | LEVEL METER SWITCH (AUTO TUNING MODE: H) |
| 11 | MEEQ – A | OUT | SET THE METAL REC EQ TO 4 POSITION AT THIS TWO OUTPUT (FUCTORY SETTING ; MEEQ-A: L, MEEQ-B: H) |
| 12 | MEEQ – B | OUT | |
| 13 | $\overline{\text{BIAS}}$ | OUT | B MECHA BIAS OSC CONTROL OUTPUT (REC MODE: L) |
| 14 | $\overline{\text{LINEINMUTE}}$ | OUT | LINE IN SIGNAL MUTE CONTROL OUTPUT (REC MODE EXCEPT DUBBING: H, OTHER: L) |
| 15 | $\overline{\text{AMS}}$ | OUT | A MECHA MS MODE, B MECHA PB MODE; H, OTHER: L |
| 16 | VDD | IN | 5 V |

◆ **IC702 (M50253P) : PORT EXPANDER-2**

| PIN NO. | SIGNAL NAME | IN/OUT | DESCRIPTION |
|---|---|---|---|
| 1 | Vss | – | GND |
| 2 | DATA | IN | SERIAL DATA INPUT (IC701) |
| 3 | CLK | IN | SERIAL CLOCK INPUT (IC701) |
| 4 | $\overline{\text{NRC – LED}}$ | OUT | DOLBY C LED LIGHT UP CONTROL OUTPUT (DOLBY C: L) |
| 5 | $\overline{\text{NRB – LED}}$ | OUT | DOLBY B LED LIGHT UP CONTROL OUTPUT (DOLBY B: L) |
| 6 | $\overline{\text{CAL– LED}}$ | OUT | AUTO TUNING LED INDICATION |
| 7 | $\overline{\text{MUTE}}$ | OUT | LINE OUT MUTE CONTROL OUTPUT (MUTE: L) |
| 8 | $\overline{\text{INVOL}}$ | OUT | IC INPUT ELEC VOL CONTROL. DAC CONTROL: H OUT VOL CONTROL: L, B MECHA REC MODE (EXCEPT DUB DDRP, AUTO TONE): L |
| 9 | STANDBY | OUT | STANDBY MODE INDICATE OUTPUT. STANDBY MODE: H |
| 10 | NS | OUT | TAPE SPEED CONTROL, HIGH SPEED DUB MODE: L |
| 11 | CAPM | OUT | CAPSTAN MOTOR ON/OFF CONTROL OUTPUT. REC/PAUSE, REC/PB, PAUSE, PB: H |
| 12 | $\overline{\text{B. PLAY}}$ | OUT | B MECHA REEL MOTOR VOLTAGE SWITCH OUTPUT. PB MODE: L |
| 13 | $\overline{\text{A. PLAY}}$ | OUT | A MECHA REEL MOTOR VOLTAGE SWITCH OUTPUT. PB MODE: L |
| 14 | A. F. RELL | OUT | A MECHA REEL MOTOR OUTPUT (L REEL → R REEL: H) |
| 15 | A. R. RELL | OUT | A MECHA REEL MOTOR OUTPUT (R REEL → L REEL: H) |
| 16 | VDD | IN | 5V |

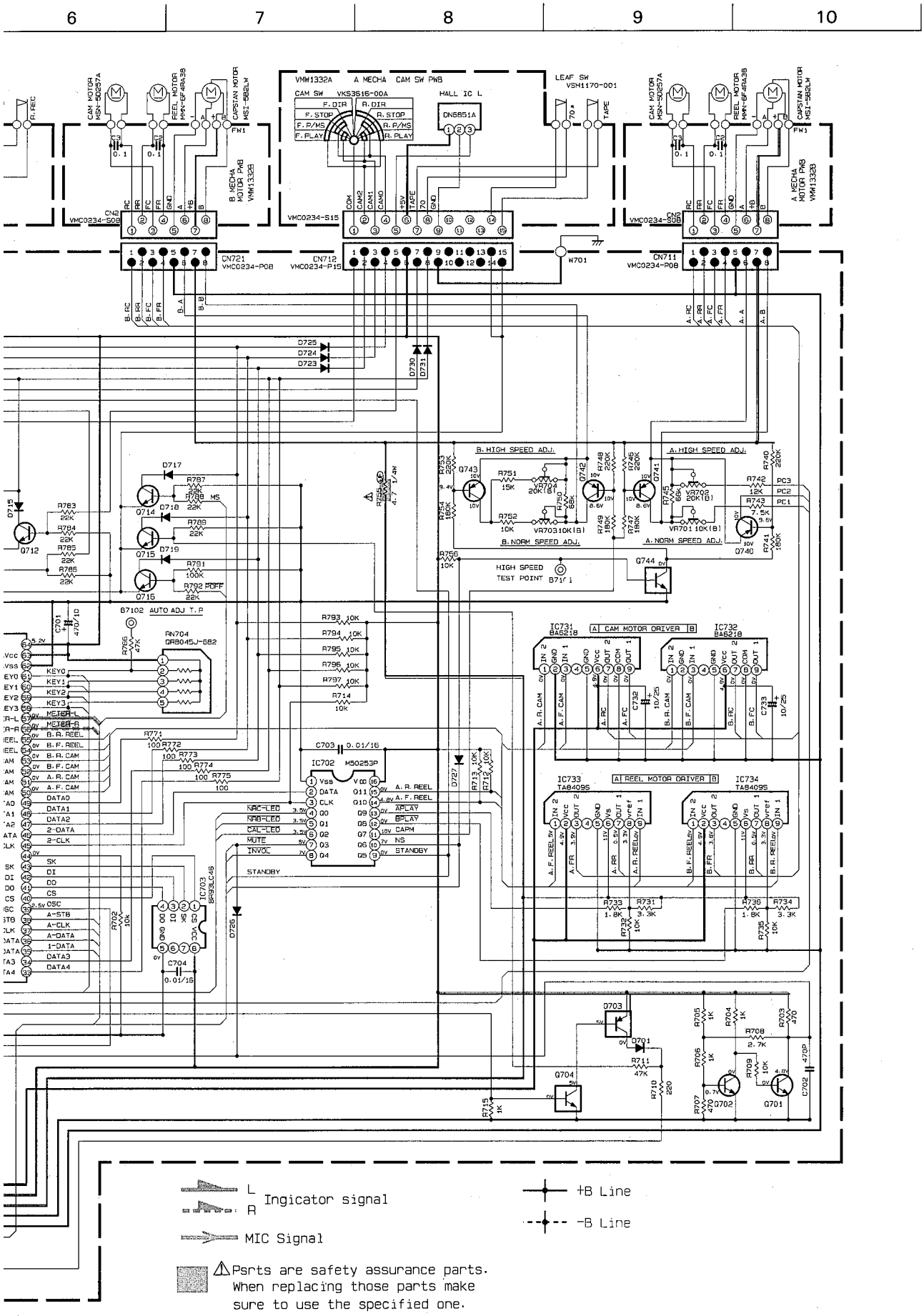
# 7 Standard Schematic Diagrams

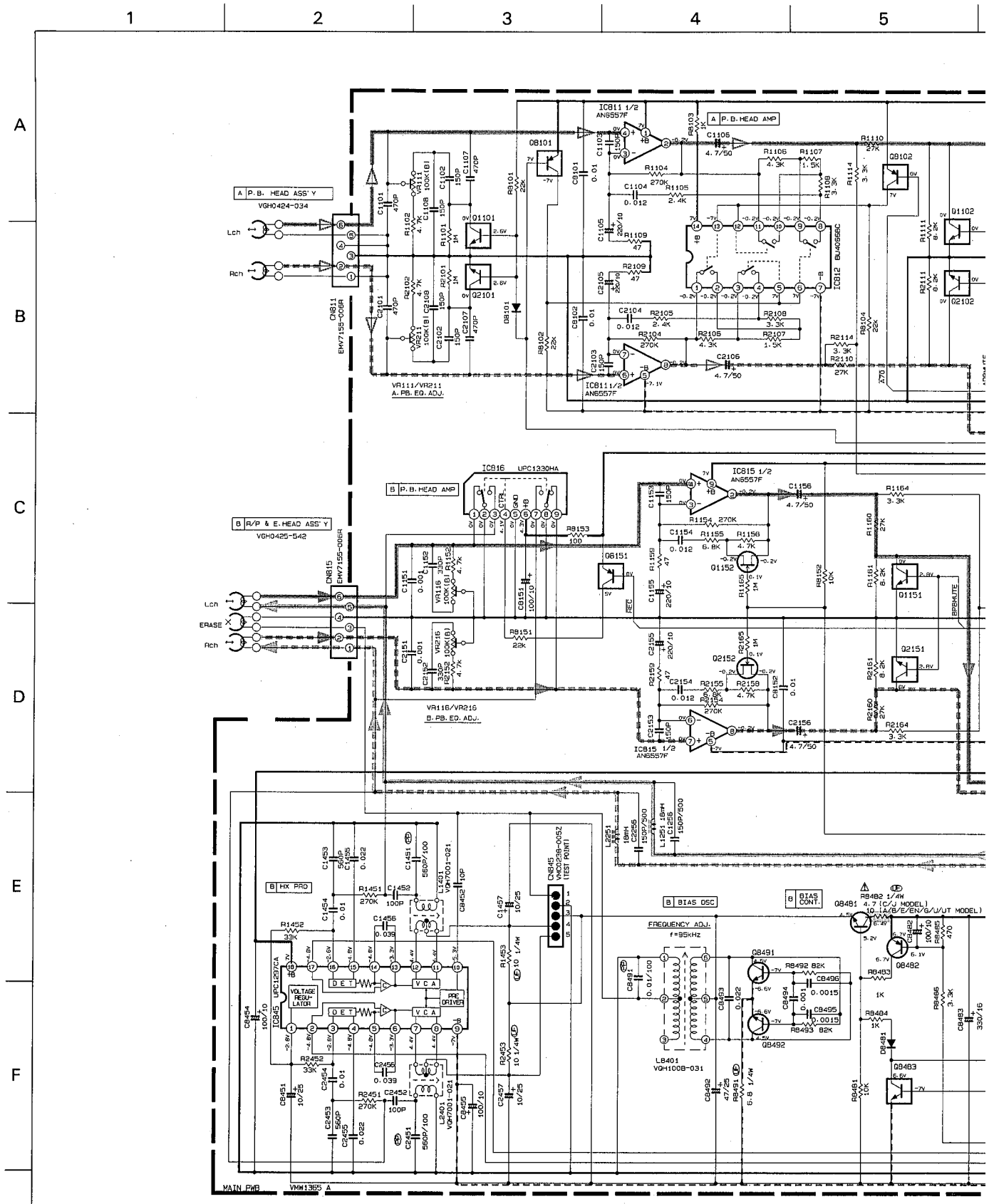
| SEMICONDUCTOR | Ref. No. |
|---|---|
| DTC124ES | Q704, Q708, Q709, Q710, Q711, Q744, |
| 2SC1740S(RS) | Q701, Q702, Q705, Q706, Q707, Q712, Q713, Q714, Q715, Q716, |
| DTA124ES | Q703, |
| DTC114ES | Q720, |
| 2SA1175(HFE) | Q740, Q741, Q742, Q743, |




Note : VDH2356002CV

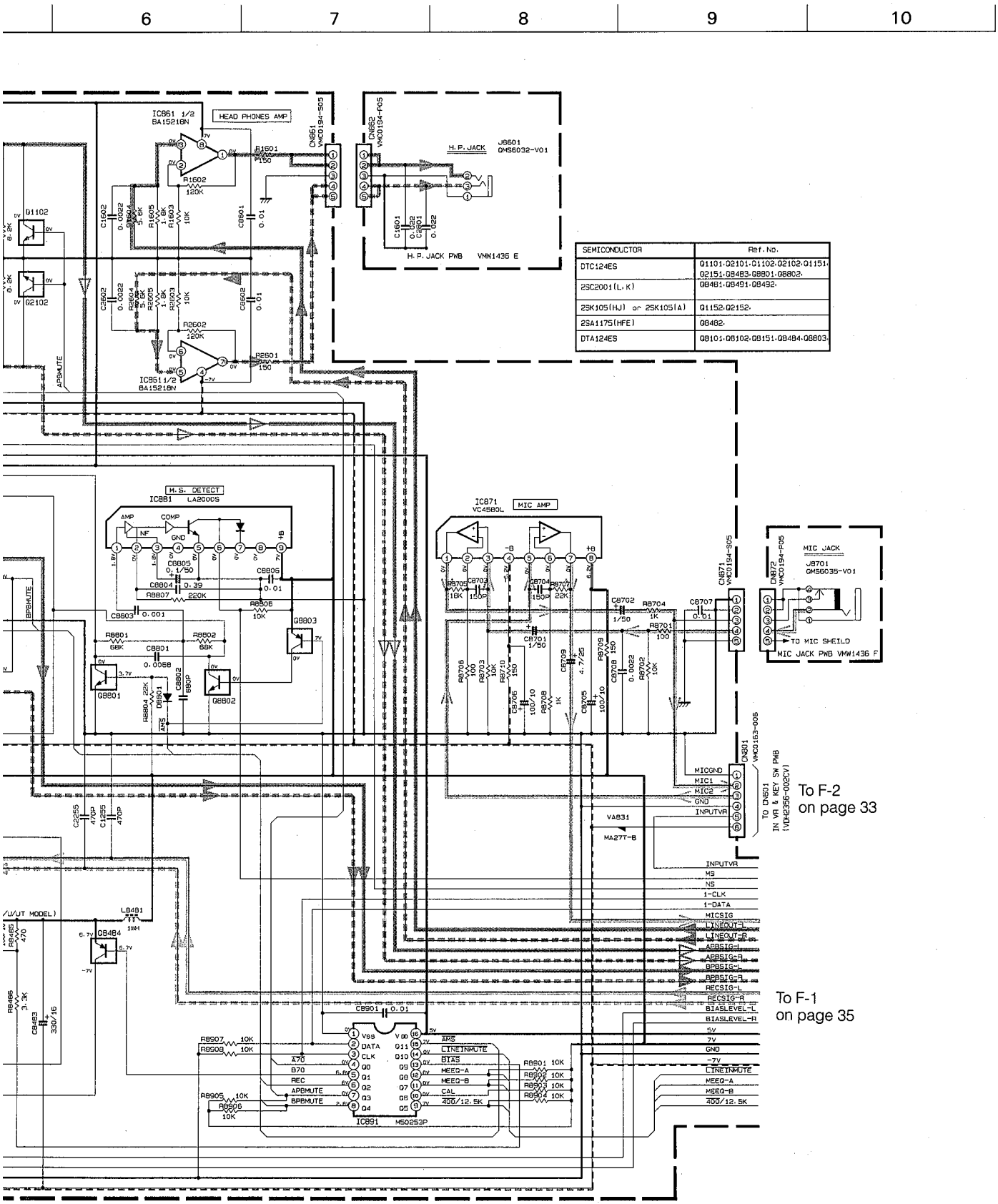
Fig. 7-1


6
7
8
9
10
VMW1332A A MECHA CAM SW PWB
CAM SW VKS3516-00A
F. STOP
R. STOP
F. P/MS
R. P/MS
F. PLAY
R. PLAY
HALL IC L
DN6851A
LEAF SW VSH1170-001
TAPE
CAM MOTOR MSN-502S7A
REEL MOTOR MAN-6F-48A38
CAPSTAN MOTOR MSI-582LW
B. MECHA MOTOR PWB VWM1328
A. MECHA MOTOR PWB VWM1328
CN2 VMC0234-S08
VMC0234-S15
CN721 VMC0234-P08
CN712 VMC0234-P15
CN711 VMC0234-P08
W701
B. HIGH SPEED ADJ.
A. HIGH SPEED ADJ.
B. NORM SPEED ADJ.
A. NORM SPEED ADJ.
HIGH SPEED TEST POINT
B7101
B7102 AUTO ADJ T. P
IC731 BA5218 A CAM MOTOR DRIVER B
IC732 BA6218
IC733 TA8409S A REEL MOTOR DRIVER B
IC734 TA8409S
IC702 M50253P
IC703 BR93LC46
RN704 CRB045J-682
KEY0
KEY1
KEY2
KEY3
METER-L
METER-R
B. R. REEL
B. F. REEL
B. R. CAM
B. F. CAM
A. R. CAM
A. F. CAM
DATA0
DATA1
DATA2
2-DATA
2-CLK
SK
DI
DO
CS
OSC
A-STB
A-CLK
A-DATA
1-DATA
DATA3
DATA4
NRC-CLEO
NRB-CLEO
CAL-CLEO
MUTE
INVOC
STANDBY
APLAY
BPLAY
CAPM
NS
PC3
PC2
PC1
L
R
Ingicator signal
MIC Signal
+B Line
-B Line
⚠Psrts are safety assurance parts.
When replacing those parts make
sure to use the specified one.



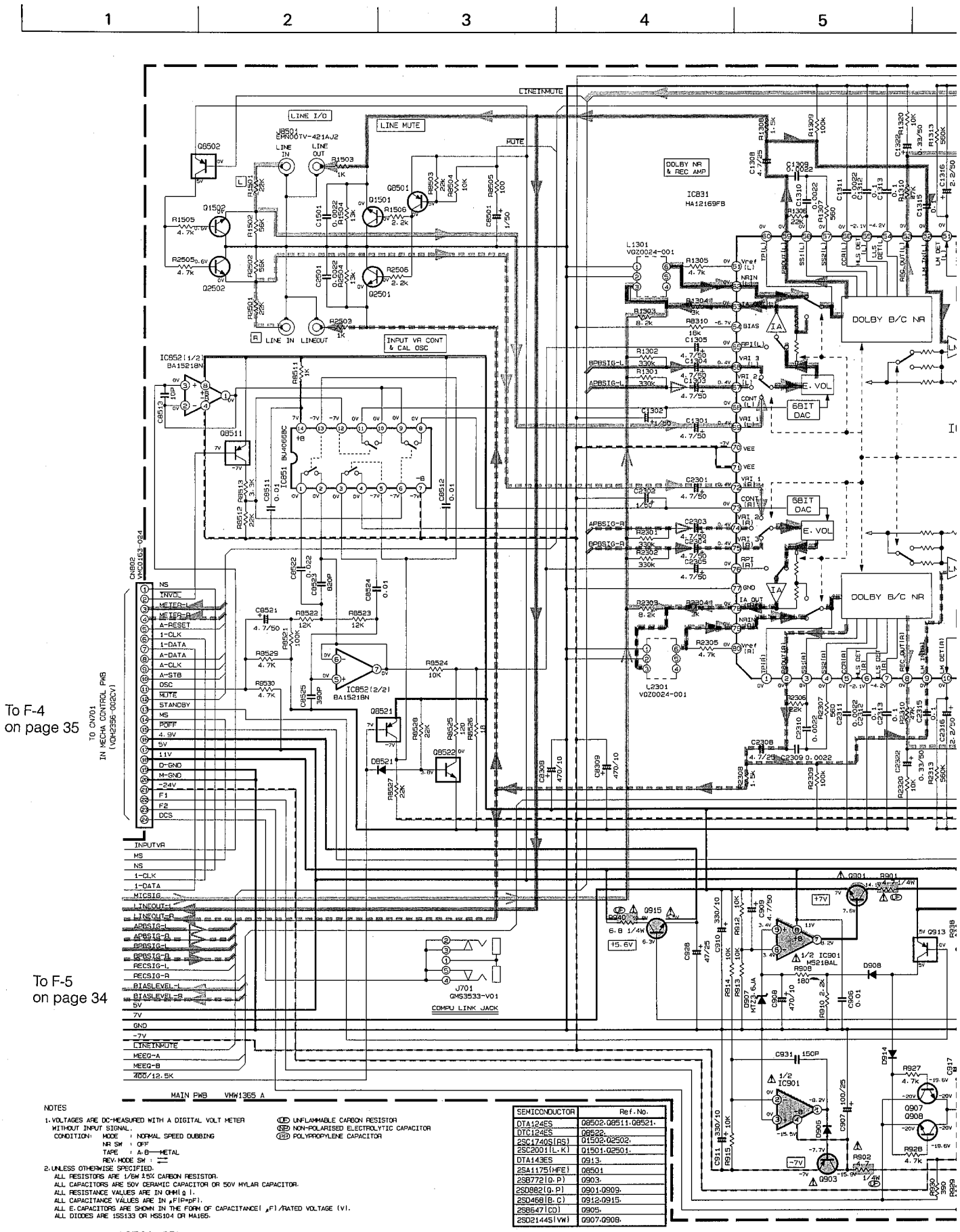

Note : VDH2356002AV

Fig. 7-2




| SEMICONDUCTOR | Ref.No. |
|---|---|
| DTC124ES | Q1101·Q2101·Q1102·Q2102·Q1151·Q2151·Q8483·Q8801·Q8802· |
| 2SC2001(L,K) | Q8481·Q8491·Q8492· |
| 2SK105(HJ) or 2SK105(A) | Q1152·Q2152· |
| 2SA1175(HFE) | Q8482· |
| DTA124ES | Q8101·Q8102·Q8151·Q8484·Q8803· |

⚠Psrts are safety assurance parts. When replacing those parts make sure to use the specified one.




NOTES

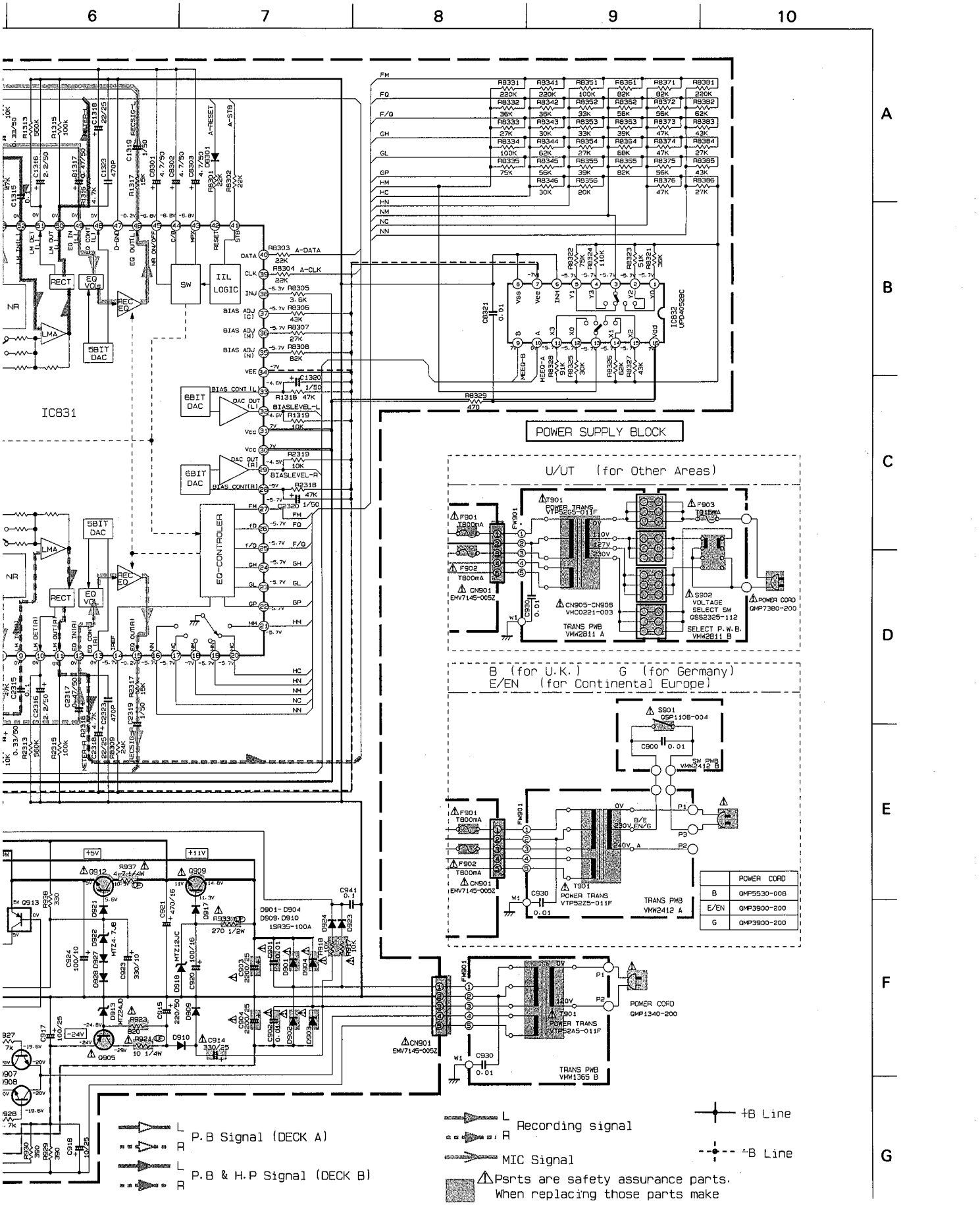
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
   CONDITION: MODE : NORMAL SPEED DUBBING
   NR SW : OFF
   TAPE : A-B—METAL
   REV. MODE SW : ⇉
2. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
   ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE(V).
   ALL DIODES ARE 1SS133 OR HSS104 OR MA165.

(UR) UNFLAMMABLE CARBON RESISTOR
(NP) NON-POLARISED ELECTROLYTIC CAPACITOR
(PP) POLYPROPYLENE CAPACITOR

| SEMICONDUCTOR | Ref.No. |
|---|---|
| DTA124ES | Q8502.Q8511.Q8521. |
| DTC124ES | Q8522. |
| 2SC1740S(RS) | Q1502.Q2502. |
| 2SC2001(L.K) | Q1501.Q2501. |
| DTA143ES | Q913. |
| 2SA1175(HFE) | Q8501 |
| 2SB772(Q.P) | Q903. |
| 2SD882(Q.P) | Q901.Q909. |
| 2SD468(B.C) | Q912.Q915. |
| 2SB647(CD) | Q905. |
| 2SD2144S(VW) | Q907.Q908. |

Note : VDH2356006BV

Fig. 7-3


6
7
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10
A
B
C
D
E
F
G
IC831
POWER SUPPLY BLOCK
U/UT (for Other Areas)
B (for U.K.) G (for Germany)
E/EN (for Continental Europe)
POWER CORD
B QMP5530-006
E/EN QMP3900-200
G QMP3900-200
TRANS PWB VMW2811 A
TRANS PWB VMW2412 A
TRANS PWB VMW1365 B
SW PWB VMW2412 B
SELECT P.W.B. VMW2811 B
POWER CORD QMP7380-200
POWER CORD QMP1340-200
L P.B Signal (DECK A)
R
L P.B & H.P Signal (DECK B)
R
L Recording signal
R
MIC Signal
+B Line
-B Line
⚠Psrts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

# 8 Location of P. C. Board parts and Parts List

## ■ Main Board

◆ Main amp. board

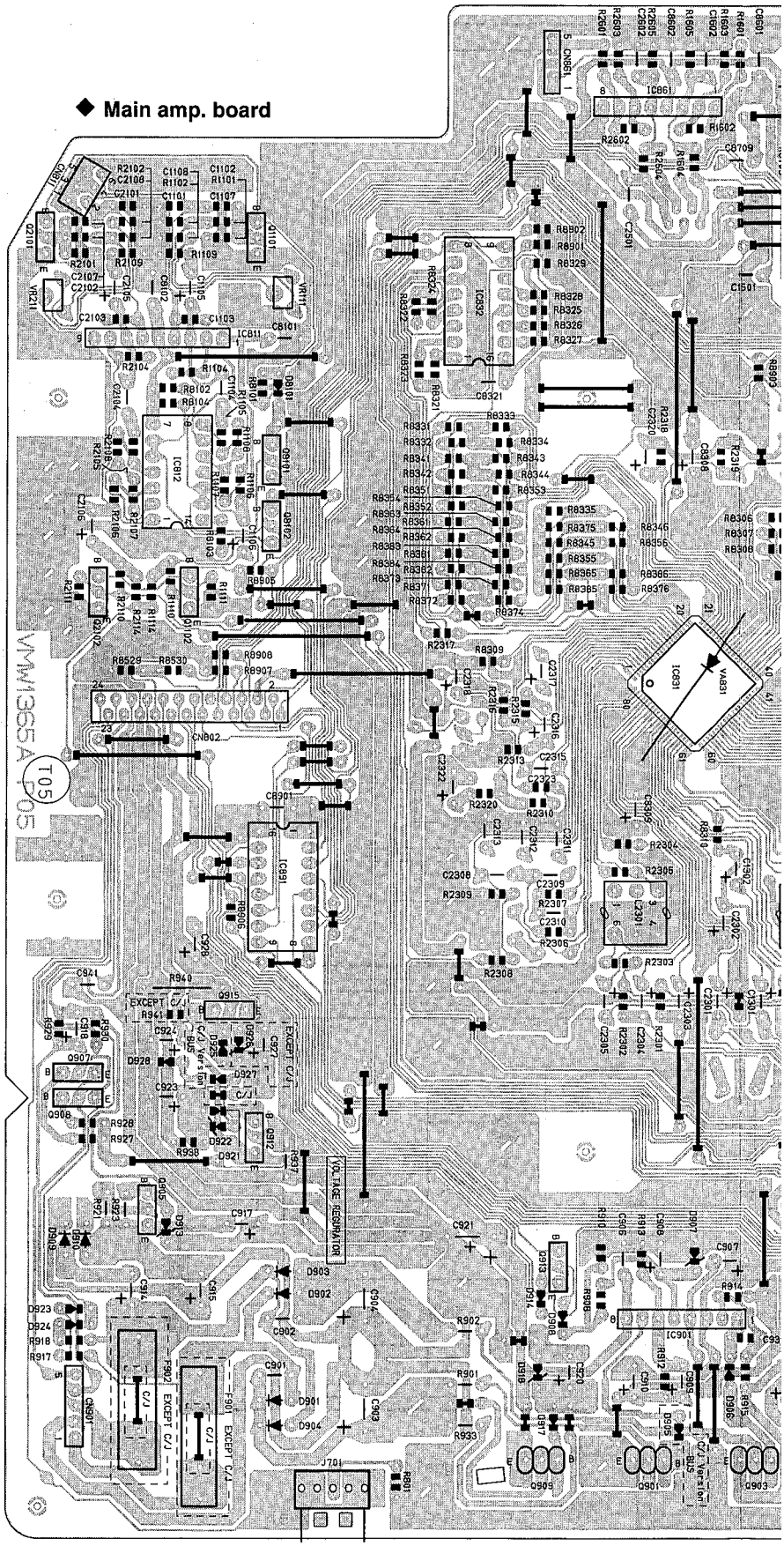
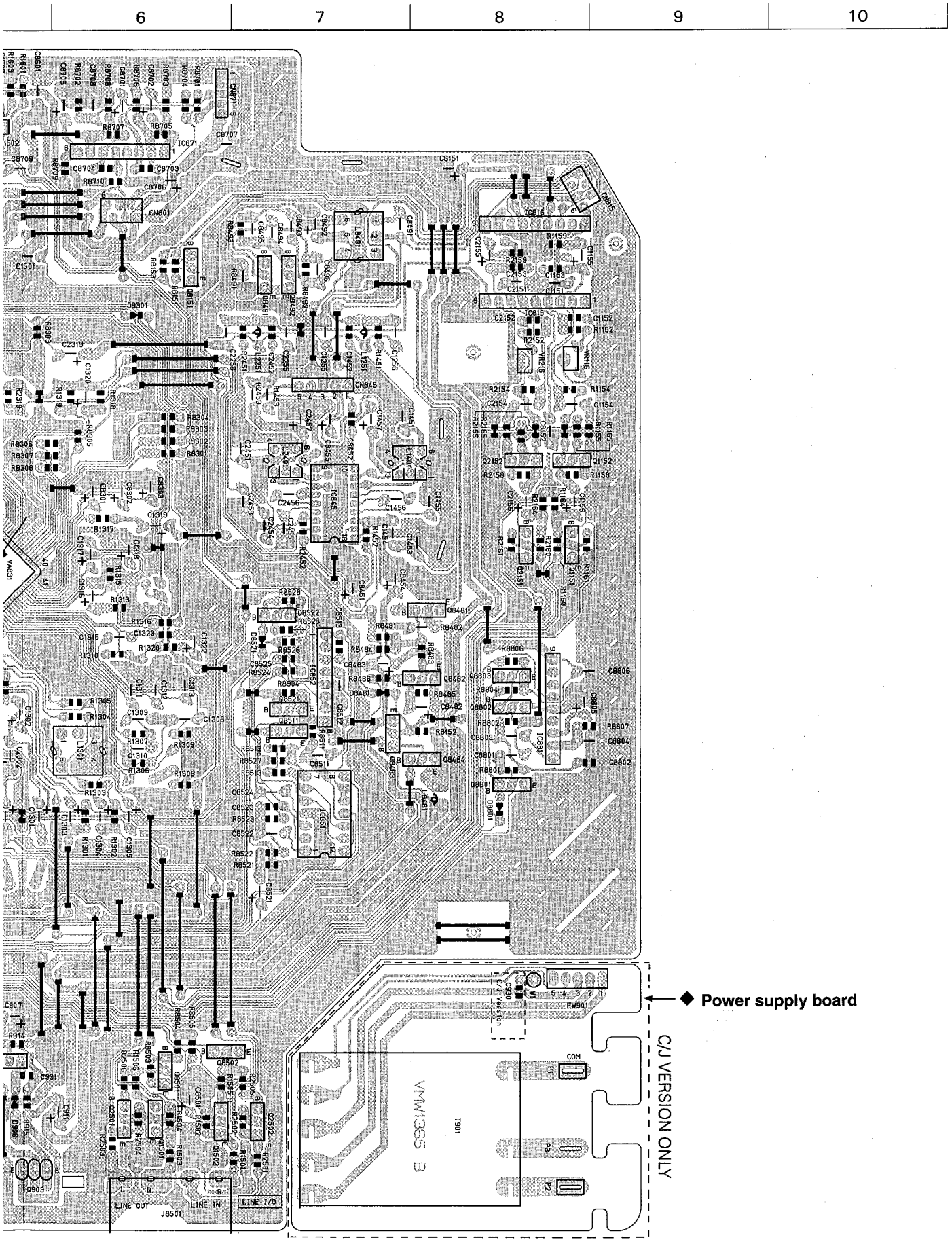



Fig. 8-1


6
7
8
9
10
◆ Power supply board
C/J VERSION ONLY
LINE OUT
LINE IN
LINE I/O
J8501
FW901
T901
VMW1365 B
COM
P1
P2
P3

## ● Main Board Parts List

BLOCK NO. 01

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | C 901 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C 902 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| ⚠ | C 903 | QETB1EM-228N | E.CAPACITOR | 2200MF 20% 25V | |
| ⚠ | C 904 | QETB1EM-228N | E.CAPACITOR | 2200MF 20% 25V | |
| | C 906 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C 907 | QET41EM-107 | E.CAPACITOR | 100MF 20% 25V | |
| | C 908 | QET41AM-477 | E.CAPACITOR | 470MF 20% 10V | |
| | C 909 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C 910 | QETC1AM-337ZN | E.CAPACITOR | 330MF 20% 10V | |
| | C 911 | QETC1AM-337ZN | E.CAPACITOR | 330MF 20% 10V | |
| ⚠ | C 914 | QETC1EM-337ZN | E.CAPACITOR | 330MF 20% 25V | |
| | C 915 | QETC1HM-227ZN | E.CAPACITOR | 220MF 20% 50V | |
| | C 917 | QET41EM-107 | E.CAPACITOR | 100MF 20% 25V | |
| | C 918 | QET41EM-106 | E.CAPACITOR | 10MF 20% 25V | |
| | C 920 | QET41CM-107 | E.CAPACITOR | 100MF 20% 16V | |
| | C 921 | QET41CM-477 | E.CAPACITOR | 470MF 20% 16V | |
| | C 923 | QETC1AM-337ZN | E.CAPACITOR | 330MF 20% 10V | |
| | C 924 | QET41AM-107 | E.CAPACITOR | 100MF 20% 10V | |
| | C 927 | QET41AM-107 | E.CAPACITOR | 100MF 20% 10V | B,E,EN |
| | C 927 | QET41AM-107 | AL E.CAPACITOR | 100 20% 10V | G,U,UT |
| | C 928 | QET41EM-476 | E.CAPACITOR | 47MF 20% 25V | |
| | C 930 | QCVB1CM-103Y | C.CAPACITOR | .010MF 20% 16V | C,J |
| | C 931 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C 941 | QFV41HJ-104ZM | FILM CAPACITOR | .10MF 5% 50V | |
| | CN801 | VMC0163-006 | CONNECTOR | | |
| | CN802 | VMC0163-024 | CONNECTOR | | |
| | CN811 | EMV7155-006R | CONNECTOR | | |
| | CN815 | EMV7155-006R | CONNECTOR | | |
| | CN845 | VMC0040-005 | CONNECTOR | | B,E,EN |
| | CN845 | VMC0040-005 | CONNECTOR | | G,U,UT |
| | CN845 | VMC0238-005Z | CONNECTOR | | C,J |
| | CN861 | VMC0194-S05 | CONNECTOR | | |
| | CN862 | VMC0194-P05 | CONNECTOR | | |
| | CN871 | VMC0194-S05 | CONNECTOR | | |
| | CN872 | VMC0194-P05 | CONNECTOR | | |
| | CN901 | EMV7145-005Z | SOCKET I.M | | |
| | C1101 | QCBB1HK-471Y | C.CAPACITOR | 470PF 10% 50V | |
| | C1102 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C1103 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C1104 | QFN41HJ-123 | M.CAPACITOR | .012MF 5% 50V | |
| | C1105 | QET41AM-227 | E.CAPACITOR | 220MF 20% 10V | |
| | C1106 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C1107 | QCBB1HK-471Y | C.CAPACITOR | 470PF 10% 50V | |
| | C1108 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C1151 | QFN41HJ-102 | M.CAPACITOR | 1000PF 5% 50V | |
| | C1152 | QCBB1HK-331Y | C.CAPACITOR | 330PF 10% 50V | |
| | C1153 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C1154 | QFN41HJ-123 | M.CAPACITOR | .012MF 5% 50V | |
| | C1155 | QET41AM-227 | E.CAPACITOR | 220MF 20% 10V | |
| | C1156 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C1255 | QCS11HJ-471 | C.CAPACITOR | 470PF 5% 50V | |
| | C1256 | QCS32HJ-151ZV | C.CAPACITOR | 150PF 5% 500V | |
| | C1301 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C1302 | QET41HM-105 | E.CAPACITOR | 1.0MF 20% 50V | |
| | C1303 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |

BLOCK NO. 01

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | C1304 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C1305 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C1308 | QEN41EM-475 | NP.E.CAPACITOR | 4.7MF 20% 25V | |
| | C1309 | QFN41HJ-222 | M.CAPACITOR | 2200PF 5% 50V | |
| | C1310 | QFN41HJ-222 | M.CAPACITOR | 2200PF 5% 50V | |
| | C1311 | QFN41HJ-222 | M.CAPACITOR | 2200PF 5% 50V | |
| | C1312 | QFV41HJ-104ZM | FILM CAPACITOR | .10MF 5% 50V | |
| | C1313 | QFV41HJ-104ZM | FILM CAPACITOR | .10MF 5% 50V | |
| | C1315 | QFLC1HJ-104ZM | M.CAPACITOR | .10MF 5% 50V | |
| | C1316 | QETC1HM-225ZN | E.CAPACITOR | 2.2MF 20% 50V | |
| | C1317 | QET41HM-474 | E.CAPACITOR | .47MF 20% 50V | |
| | C1318 | QETC1EM-226ZN | E.CAPACITOR | 22MF 20% 25V | |
| | C1319 | QET41HM-105 | E.CAPACITOR | 1.0MF 20% 50V | |
| | C1320 | QET41HM-105 | E.CAPACITOR | 1.0MF 20% 50V | |
| | C1322 | QETC1HM-334ZM | E CAPACITOR | .33MF 20% 50V | |
| | C1323 | QCBB1HK-471Y | C.CAPACITOR | 470PF 10% 50V | |
| | C1451 | QFP32AJ-561ZM | PP.CAPACITOR | 560PF 5% 100V | |
| | C1452 | QCBB1HK-101Y | C.CAPACITOR | 100PF 10% 50V | |
| | C1453 | QCS11HJ-561 | C.CAPACITOR | 560PF 5% 50V | |
| | C1454 | QFN81HJ-103 | M.CAPACITOR | .010MF 5% 50V | |
| | C1455 | QFLC1HJ-223ZM | M.CAPACITOR | .022MF 5% 50V | |
| | C1456 | QFLC1HJ-393ZM | M.CAPACITOR | .039MF 5% 50V | |
| | C1457 | QET41EM-106 | E.CAPACITOR | 10MF 20% 25V | |
| | C1501 | QCY31HK-222Z | C.CAPACITOR | 2200PF 10% 50V | |
| | C1601 | QCF11HP-223 | C.CAPACITOR | .022MF +100:-0% | |
| | C1602 | QCY31HK-222Z | C.CAPACITOR | 2200PF 10% 50V | |
| | C2101 | QCBB1HK-471Y | C.CAPACITOR | 470PF 10% 50V | |
| | C2102 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C2103 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C2104 | QFN41HJ-123 | M.CAPACITOR | .012MF 5% 50V | |
| | C2105 | QET41AM-227 | E.CAPACITOR | 220MF 20% 10V | |
| | C2106 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C2107 | QCBB1HK-471Y | C.CAPACITOR | 470PF 10% 50V | |
| | C2108 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C2151 | QFN41HJ-102 | M.CAPACITOR | 1000PF 5% 50V | |
| | C2152 | QCBB1HK-331Y | C.CAPACITOR | 330PF 10% 50V | |
| | C2153 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C2154 | QFN41HJ-123 | M.CAPACITOR | .012MF 5% 50V | |
| | C2155 | QET41AM-227 | E.CAPACITOR | 220MF 20% 10V | |
| | C2156 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C2255 | QCS11HJ-471 | C.CAPACITOR | 470PF 5% 50V | |
| | C2256 | QCS32HJ-151ZV | C.CAPACITOR | 150PF 5% 500V | |
| | C2301 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C2302 | QET41HM-105 | E.CAPACITOR | 1.0MF 20% 50V | |
| | C2303 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C2304 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C2305 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C2308 | QEN41EM-475 | NP.E.CAPACITOR | 4.7MF 20% 25V | |
| | C2309 | QFN41HJ-222 | M.CAPACITOR | 2200PF 5% 50V | |
| | C2310 | QFN41HJ-222 | M.CAPACITOR | 2200PF 5% 50V | |
| | C2311 | QFN41HJ-222 | M.CAPACITOR | 2200PF 5% 50V | |
| | C2312 | QFV41HJ-104ZM | FILM CAPACITOR | .10MF 5% 50V | |
| | C2313 | QFV41HJ-104ZM | FILM CAPACITOR | .10MF 5% 50V | |
| | C2315 | QFLC1HJ-104ZM | M.CAPACITOR | .10MF 5% 50V | |
| | C2316 | QETC1HM-225ZN | E.CAPACITOR | 2.2MF 20% 50V | |

BLOCK NO. 01

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | C2317 | QET41HM-474 | E.CAPACITOR | .47MF 20% 50V | |
| | C2318 | QETC1EM-226ZN | E.CAPACITOR | 22MF 20% 25V | |
| | C2319 | QET41HM-105 | E.CAPACITOR | 1.0MF 20% 50V | |
| | C2320 | QET41HM-105 | E.CAPACITOR | 1.0MF 20% 50V | |
| | C2322 | QETC1HM-334ZM | E.CAPACITOR | .33MF 20% 50V | |
| | C2323 | QCBB1HK-471Y | C.CAPACITOR | 470PF 10% 50V | |
| | C2451 | QFP32AJ-561ZM | PP.CAPACITOR | 560PF 5% 100V | |
| | C2452 | QCBB1HK-101Y | C.CAPACITOR | 100PF 10% 50V | |
| | C2453 | QCS11HJ-561 | C.CAPACITOR | 560PF 5% 50V | |
| | C2454 | QFN81HJ-103 | M.CAPACITOR | .010MF 5% 50V | |
| | C2455 | QFLC1HJ-223ZM | M.CAPACITOR | .022MF 5% 50V | |
| | C2456 | QFLC1HJ-393ZM | M.CAPACITOR | .039MF 5% 50V | |
| | C2457 | QET41EM-106 | E.CAPACITOR | 10MF 20% 25V | |
| | C2501 | QCY31HK-222Z | C.CAPACITOR | 2200PF 10% 50V | |
| | C2601 | QCF11HP-223 | C.CAPACITOR | .022MF +100:-0% | |
| | C2602 | QCY31HK-222Z | C.CAPACITOR | 2200PF 10% 50V | |
| | C8101 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C8102 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C8151 | QET41AM-107 | E.CAPACITOR | 100MF 20% 10V | |
| | C8152 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C8301 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C8302 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C8303 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C8308 | QET41AM-477 | E.CAPACITOR | 470MF 20% 10V | |
| | C8309 | QET41AM-477 | E.CAPACITOR | 470MF 20% 10V | |
| | C8321 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C8451 | QET41EM-106 | E.CAPACITOR | 10MF 20% 25V | |
| | C8452 | QCS11HJ-100 | C.CAPACITOR | 10PF 5% 50V | |
| | C8454 | QET41AM-107 | E.CAPACITOR | 100MF 20% 10V | |
| | C8455 | QET41AM-107 | E.CAPACITOR | 100MF 20% 10V | |
| | C8482 | QET41AM-107 | E.CAPACITOR | 100MF 20% 10V | |
| | C8483 | QETC1CM-337ZN | E.CAPACITOR | 330MF 20% 16V | |
| | C8491 | QFP32AJ-103ZM | PP.CAPACITOR | .010MF 5% 100V | |
| | C8492 | QET41EM-476 | E.CAPACITOR | 47MF 20% 25V | |
| | C8493 | QFLC1HJ-223ZM | M.CAPACITOR | .022MF 5% 50V | |
| | C8494 | QFN41HJ-102 | M.CAPACITOR | 1000PF 5% 50V | |
| | C8495 | QFN81HJ-152 | M.CAPACITOR | 1500PF 5% 50V | |
| | C8496 | QFN81HJ-152 | M.CAPACITOR | 1500PF 5% 50V | |
| | C8501 | QET41HM-105 | E.CAPACITOR | 1.0MF 20% 50V | |
| | C8511 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C8512 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C8513 | QCS11HJ-100 | C.CAPACITOR | 10PF 5% 50V | |
| | C8521 | QET41HM-475 | E.CAPACITOR | 4.7MF 20% 50V | |
| | C8522 | QFLC1HJ-223ZM | M.CAPACITOR | .022MF 5% 50V | |
| | C8523 | QCBB1HK-821Y | C.CAPACITOR | 820PF 10% 50V | |
| | C8524 | QFN81HJ-103 | M.CAPACITOR | .010MF 5% 50V | |
| | C8525 | QCBB1HK-391Y | C.CAPACITOR | 390PF 10% 50V | |
| | C8601 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C8602 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C8701 | QET41HM-105 | E.CAPACITOR | 1.0MF 20% 50V | |
| | C8702 | QET41HM-105 | E.CAPACITOR | 1.0MF 20% 50V | |
| | C8703 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C8704 | QCBB1HK-151Y | C.CAPACITOR | 150PF 10% 50V | |
| | C8705 | QET41AM-107 | E.CAPACITOR | 100MF 20% 10V | |
| | C8706 | QET41AM-107 | E.CAPACITOR | 100MF 20% 10V | |

BLOCK NO. 01

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | C8707 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C8708 | QFN41HJ-222 | M.CAPACITOR | 2200PF 5% 50V | |
| | C8709 | QEN41EM-475 | NP.E.CAPACITOR | 4.7MF 20% 25V | |
| | C8801 | QFN41HJ-682 | M.CAPACITOR | 6800PF 5% 50V | |
| | C8802 | QCBB1HK-681Y | C.CAPACITOR | 680PF 10% 50V | |
| | C8803 | QFN41HJ-102 | M.CAPACITOR | 1000PF 5% 50V | |
| | C8804 | QFV71HJ-394ZM | FILM CAPACITOR | .39MF 5% 50V | |
| | C8805 | QETC1HM-104ZN | E.CAPACITOR | .10MF 20% 50V | |
| | C8806 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| | C8901 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | |
| ⚠ | D 901 | 1SR35-100A-T2 | SI DIODE | | |
| ⚠ | D 902 | 1SR35-100A-T2 | SI DIODE | | |
| ⚠ | D 903 | 1SR35-100A-T2 | SI DIODE | | |
| ⚠ | D 904 | 1SR35-100A-T2 | SI DIODE | | |
| | D 905 | MA700 | S.B.DIODE | | B,E,EN |
| | D 905 | MA700 | S.B.DIODE | | G,U,UT |
| | D 906 | 1SS133 | SI DIODE | | |
| ⚠ | D 907 | MTZ3.6JA | ZENER DIODE | | |
| | D 908 | 1SS133 | SI DIODE | | |
| ⚠ | D 909 | 1SR35-100A-T2 | SI DIODE | | |
| ⚠ | D 910 | 1SR35-100A-T2 | SI DIODE | | |
| ⚠ | D 913 | MTZ24JD | ZENER DIODE | | |
| | D 914 | 1SS133 | SI DIODE | | |
| | D 917 | 1SS133 | SI DIODE | | |
| ⚠ | D 918 | MTZ12JC | ZENER DIODE | | |
| | D 921 | 1SS133 | SI DIODE | | |
| ⚠ | D 922 | MTZ4.7JB | ZENER DIODE | | |
| | D 923 | 1SS133 | SI DIODE | | |
| | D 924 | 1SS133 | SI DIODE | | |
| | D 925 | 1SS133 | SI DIODE | | G,U,UT |
| | D 925 | 1SS133 | SI DIODE | | B,E,EN |
| | D 926 | MTZ6.8JB | ZENER DIODE | | G,U,UT |
| | D 926 | MTZ6.8JB | ZENER DIODE | | B,E,EN |
| | D 927 | 1SS133 | SI DIODE | | |
| | D 928 | 1SS133 | SI DIODE | | |
| | D8101 | 1SS133 | SI DIODE | | |
| | D8301 | 1SS133 | SI DIODE | | |
| | D8481 | 1SS133 | SI DIODE | | |
| | D8521 | 1SS133 | SI DIODE | | |
| | D8801 | 1SS133 | SI DIODE | | |
| | IC811 | AN6557F | IC | | |
| | IC812 | BU4066BC | IC | | |
| | IC815 | AN6557F | IC | | |
| | IC816 | UPC1330HA | IC | | |
| | IC831 | HA12169FB | IC | | |
| | IC832 | UPD4052BC | IC | | |
| | IC845 | UPC1297CA | IC | | |
| | IC851 | BU4066BC | IC | | |
| | IC852 | BA15218N | IC | | |
| | IC861 | BA15218N | IC | | |
| | IC871 | VC4580L | IC | | |
| | IC881 | LA2000S | IC | | |
| | IC891 | M50253P | IC | | |
| ⚠ | IC901 | M5218AL | IC | | |
| | J 701 | QMS3533-V01 | JACK | | |

BLOCK NO. 01

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | J8501 | EMN00TV-421AJ2 | PIN JACK | | |
| | J8601 | QMS6032-V01 | JACK | | |
| | J8701 | QMS6035-V01 | JACK | | |
| | L1251 | VQP0001-183 | INDUCTOR | | |
| | L1301 | VQZ0024-001 | FILTER | | |
| | L1401 | VQH7001-021 | OSC COIL(BIAS) | | |
| | L2251 | VQP0001-183 | INDUCTOR | | |
| | L2301 | VQZ0024-001 | FILTER | | |
| | L2401 | VQH7001-021 | OSC COIL(BIAS) | | |
| | L8401 | VQH1008-031 | OSC COIL(BIAS) | | |
| | L8481 | VQP0001-102S | INDUCTOR | | |
| ⚠ | P 1 | VMZ0034-001 | TAB | FOR POWER CORD | |
| ⚠ | P 2 | VMZ0034-001 | TAB | FOR POWER CORD | |
| ⚠ | Q 901 | 2SD882(P,Q) | TRANSISTOR | | |
| ⚠ | Q 903 | 2SB772(Q,P) | TRANSISTOR | | |
| ⚠ | Q 905 | 2SB647(CD) | TRANSISTOR | | |
| | Q 907 | 2SD2144S(VW) | TRANSISTOR | | |
| | Q 908 | 2SD2144S(VW) | TRANSISTOR | | |
| ⚠ | Q 909 | 2SD882(P,Q) | TRANSISTOR | | |
| ⚠ | Q 912 | 2SD468(C) | TRANSISTOR | | |
| | Q 913 | DTA143ES | TRANSISTOR | | |
| | Q 915 | 2SD468(C) | TRANSISTOR | | |
| | Q1101 | DTC124ES | TRANSISTOR | | |
| | Q1102 | DTC124ES | TRANSISTOR | | |
| | Q1151 | DTC124ES | TRANSISTOR | | |
| | Q1152 | 2SK105(E,F,H) | TRANSISTOR | | |
| | Q1501 | 2SC2001(L,K) | TRANSISTOR | | |
| | Q1502 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q2101 | DTC124ES | TRANSISTOR | | |
| | Q2102 | DTC124ES | TRANSISTOR | | |
| | Q2151 | DTC124ES | TRANSISTOR | | |
| | Q2152 | 2SK105(E,F,H) | TRANSISTOR | | |
| | Q2501 | 2SC2001(L,K) | TRANSISTOR | | |
| | Q2502 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q8101 | DTA124ES | TRANSISTOR | | |
| | Q8102 | DTA124ES | TRANSISTOR | | |
| | Q8151 | DTA124ES | TRANSISTOR | | |
| | Q8481 | 2SC2001(L,K) | TRANSISTOR | | |
| | Q8482 | 2SA1175 | TRANSISTOR | | |
| | Q8483 | DTC124ES | TRANSISTOR | | |
| | Q8484 | DTA124ES | TRANSISTOR | | |
| | Q8491 | 2SC2001(L,K) | TRANSISTOR | | |
| | Q8492 | 2SC2001(L,K) | TRANSISTOR | | |
| | Q8501 | 2SA1175 | TRANSISTOR | | |
| | Q8502 | DTA124ES | TRANSISTOR | | |
| | Q8511 | DTA124ES | TRANSISTOR | | |
| | Q8521 | DTA124ES | TRANSISTOR | | |
| | Q8522 | DTC124ES | TRANSISTOR | | |
| | Q8801 | DTC124ES | TRANSISTOR | | |
| | Q8802 | DTC124ES | TRANSISTOR | | |
| | Q8803 | DTA124ES | TRANSISTOR | | |
| ⚠ | R 901 | QRZ0077-4R7X | CARBON RESISTOR | 4.7 5% 1/4W | G,U,UT |
| ⚠ | R 901 | QRD14CJ-4R7SX | UNF.C.RESISTOR | 4.7 5% 1/4W | C,J |
| ⚠ | R 901 | QRZ0077-4R7X | FUSE RESISTOR | 4.7 5% 1/4W | B,E,EN |
| ⚠ | R 902 | QRZ0077-4R7X | CARBON RESISTOR | 4.7 5% 1/4W | G,U,UT |

BLOCK NO. 01

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| ⚠ | R 902 | QRZ0077-4R7X | CARBON RESISTOR | 4.7 5% 1/4W | B,E,EN |
| ⚠ | R 902 | QRD14CJ-4R7SX | CARBON RESISTOR | 4.7 5% 1/4W | C,J |
| | R 908 | QRD161J-181 | CARBON RESISTOR | 180 5% 1/6W | |
| | R 910 | QRD161J-222 | CARBON RESISTOR | 2.2K 5% 1/6W | |
| | R 912 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 913 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 914 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 915 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 917 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 918 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| ⚠ | R 921 | QRD14CJ-100SX | CARBON RESISTOR | 10 5% 1/4W | C,J |
| ⚠ | R 921 | QRZ0077-100X | FUSI.RESISTOR | 10 5% 1/4W | B,E,EN |
| ⚠ | R 921 | QRZ0077-100X | FUSI.RESISTOR | 4.7 5% 1/4W | G,U,UT |
| | R 923 | QRD161J-821 | CARBON RESISTOR | 820 5% 1/6W | |
| | R 923 | QRD14CJ-821SX | CARBON RESISTOR | 820 5% 1/4W | |
| | R 923 | QRD14CJ-821SX | CARBON RESISTOR | 820 5% 1/4W | |
| | R 927 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R 928 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R 929 | QRD161J-391 | CARBON RESISTOR | 390 5% 1/6W | |
| | R 930 | QRD161J-391 | CARBON RESISTOR | 390 5% 1/6W | |
| ⚠ | R 933 | QRD12CJ-271SX | UNF.C.RESISTOR | 270 5% 1/2W | |
| ⚠ | R 937 | QRD14CJ-4R7SX | CARBON RESISTOR | 4.7 5% 1/4W | C,J |
| ⚠ | R 937 | QRZ0077-4R7X | CARBON RESISTOR | 4.7 5% 1/4W | G,U,UT |
| ⚠ | R 937 | QRZ0077-4R7X | CARBON RESISTOR | 4.7 5% 1/4W | B,E,EN |
| | R 938 | QRD161J-331 | CARBON RESISTOE | 330 5% 1/6W | |
| ⚠ | R 940 | QRH144J-6R8 | FUSI.RESISTOR | 6.8 5% 1/4W | G,U,UT |
| ⚠ | R 940 | QRD14CJ-6R8SX | UNF.C.RESISTOR | 6.8 5% 1/4W | C,J |
| ⚠ | R 940 | QRH144J-6R8 | FUSI.RESISTOR | 6.8 5% 1/4W | B,E,EN |
| | R 941 | QRD161J-471 | CARBON RESISTOR | 470 5% 1/6W | G,U,UT |
| | R 941 | QRD161J-471 | CARBON RESISTOR | 470 5% 1/6W | B,E,EN |
| | R1101 | QRD161J-105 | CARBON RESISTOR | 1.0M 5% 1/6W | |
| | R1102 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R1104 | QRD161J-274 | CARBON RESISTOR | 270K 5% 1/6W | |
| | R1105 | QRD161J-242 | CARBON RESISTOR | 2.4K 5% 1/6W | |
| | R1106 | QRD161J-432 | CARBON RESISTOR | 4.3K 5% 1/6W | |
| | R1107 | QRD161J-152 | CARBON RESISTOR | 1.5K 5% 1/6W | |
| | R1108 | QRD167J-332 | CARBON RESISTOR | 3.3K 5% 1/6W | |
| | R1109 | QRD161J-470 | CARBON RESISTOR | 47 5% 1/6W | |
| | R1110 | QRD161J-273 | CARBON RESISTOR | 27K 5% 1/6W | |
| | R1111 | QRD161J-822 | CARBON RESISTOR | 8.2K 5% 1/6W | |
| | R1114 | QRD167J-332 | CARBON RESISTOR | 3.3K 5% 1/6W | |
| | R1152 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R1154 | QRD161J-274 | CARBON RESISTOR | 270K 5% 1/6W | |
| | R1155 | QRD167J-682 | CARBON RESISTOR | 6.8K 5% 1/6W | |
| | R1158 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R1159 | QRD161J-470 | CARBON RESISTOR | 47 5% 1/6W | |
| | R1160 | QRD161J-273 | CARBON RESISTOR | 27K 5% 1/6W | |
| | R1161 | QRD161J-822 | CARBON RESISTOR | 8.2K 5% 1/6W | |
| | R1164 | QRD167J-332 | CARBON RESISTOR | 3.3K 5% 1/6W | |
| | R1165 | QRD161J-105 | CARBON RESISTOR | 1.0M 5% 1/6W | |
| | R1301 | QRD161J-334 | CARBON RESISTOR | 330K 5% 1/6W | |
| | R1302 | QRD161J-334 | CARBON RESISTOR | 330K 5% 1/6W | |
| | R1303 | QRD161J-822 | CARBON RESISTOR | 8.2K 5% 1/6W | |
| | R1304 | QRD161J-302 | CARBON RESISTOR | 3.0K 5% 1/6W | |
| | R1305 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |

BLOCK NO. 01

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | R1306 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R1307 | QRD161J-561 | CARBON RESISTOR | 560 5% 1/6W | |
| | R1308 | QRD161J-152 | CARBON RESISTOR | 1.5K 5% 1/6W | |
| | R1309 | QRD161J-104 | CARBON RESISTOR | 100K 5% 1/6W | |
| | R1310 | QRD161J-473 | CARBON RESISTOR | 47K 5% 1/6W | |
| | R1313 | QRD161J-564 | CARBON RESISTOR | 560K 5% 1/6W | |
| | R1315 | QRD161J-104 | CARBON RESISTOR | 100K 5% 1/6W | |
| | R1316 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R1317 | QRD161J-153 | CARBON RESISTOR | 15K 5% 1/6W | |
| | R1318 | QRD161J-473 | CARBON RESISTOR | 47K 5% 1/6W | |
| | R1319 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R1320 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R1451 | QRD161J-274 | CARBON RESISTOR | 270K 5% 1/6W | |
| | R1452 | QRD161J-333 | CARBON RESISTOR | 33K 5% 1/6W | |
| ⚠ | R1453 | QRD14CJ-100SX | CARBON RESISTOR | 10 5% 1/4W | |
| | R1501 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R1502 | QRD161J-563 | CARBON RESISTOR | 56K 5% 1/6W | |
| | R1503 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R1504 | QRD161J-133 | CARBON RESISTOR | 13K 5% 1/6W | |
| | R1505 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R1506 | QRD161J-222 | CARBON RESISTOR | 2.2K 5% 1/6W | |
| | R1601 | QRD161J-151 | CARBON RESISTOR | 150 5% 1/6W | |
| | R1602 | QRD161J-124 | CARBON RESISTOR | 120K 5% 1/6W | |
| | R1603 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R1604 | QRD167J-562 | CARBON RESISTOR | 5.6K 5% 1/6W | |
| | R1605 | QRD161J-182 | CARBON RESISTOR | 1.8K 5% 1/6W | |
| | R2101 | QRD161J-105 | CARBON RESISTOR | 1.0M 5% 1/6W | |
| | R2102 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R2104 | QRD161J-274 | CARBON RESISTOR | 270K 5% 1/6W | |
| | R2105 | QRD161J-242 | CARBON RESISTOR | 2.4K 5% 1/6W | |
| | R2106 | QRD161J-432 | CARBON RESISTOR | 4.3K 5% 1/6W | |
| | R2107 | QRD161J-152 | CARBON RESISTOR | 1.5K 5% 1/6W | |
| | R2108 | QRD167J-332 | CARBON RESISTOR | 3.3K 5% 1/6W | |
| | R2109 | QRD161J-470 | CARBON RESISTOR | 47 5% 1/6W | |
| | R2110 | QRD161J-273 | CARBON RESISTOR | 27K 5% 1/6W | |
| | R2111 | QRD161J-822 | CARBON RESISTOR | 8.2K 5% 1/6W | |
| | R2114 | QRD167J-332 | CARBON RESISTOR | 3.3K 5% 1/6W | |
| | R2152 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R2154 | QRD161J-274 | CARBON RESISTOR | 270K 5% 1/6W | |
| | R2155 | QRD167J-682 | CARBON RESISTOR | 6.8K 5% 1/6W | |
| | R2158 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R2159 | QRD161J-470 | CARBON RESISTOR | 47 5% 1/6W | |
| | R2160 | QRD161J-273 | CARBON RESISTOR | 27K 5% 1/6W | |
| | R2161 | QRD161J-822 | CARBON RESISTOR | 8.2K 5% 1/6W | |
| | R2164 | QRD167J-332 | CARBON RESISTOR | 3.3K 5% 1/6W | |
| | R2165 | QRD161J-105 | CARBON RESISTOR | 1.0M 5% 1/6W | |
| | R2301 | QRD161J-334 | CARBON RESISTOR | 330K 5% 1/6W | |
| | R2302 | QRD161J-334 | CARBON RESISTOR | 330K 5% 1/6W | |
| | R2303 | QRD161J-822 | CARBON RESISTOR | 8.2K 5% 1/6W | |
| | R2304 | QRD161J-302 | CARBON RESISTOR | 3.0K 5% 1/6W | |
| | R2305 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R2306 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R2307 | QRD161J-561 | CARBON RESISTOR | 560 5% 1/6W | |
| | R2308 | QRD161J-152 | CARBON RESISTOR | 1.5K 5% 1/6W | |
| | R2309 | QRD161J-104 | CARBON RESISTOR | 100K 5% 1/6W | |

BLOCK NO. 01

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | R2310 | QRD161J-473 | CARBON RESISTOR | 47K 5% 1/6W | |
| | R2313 | QRD161J-564 | CARBON RESISTOR | 560K 5% 1/6W | |
| | R2315 | QRD161J-104 | CARBON RESISTOR | 100K 5% 1/6W | |
| | R2316 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R2317 | QRD161J-153 | CARBON RESISTOR | 15K 5% 1/6W | |
| | R2318 | QRD161J-473 | CARBON RESISTOR | 47K 5% 1/6W | |
| | R2319 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R2320 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R2451 | QRD161J-274 | CARBON RESISTOR | 270K 5% 1/6W | |
| | R2452 | QRD161J-333 | CARBON RESISTOR | 33K 5% 1/6W | |
| ⚠ | R2453 | QRD14CJ-100SX | CARBON RESISTOR | 10 5% 1/4W | |
| | R2501 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R2502 | QRD161J-563 | CARBON RESISTOR | 56K 5% 1/6W | |
| | R2503 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R2504 | QRD161J-133 | CARBON RESISTOR | 13K 5% 1/6W | |
| | R2505 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R2506 | QRD161J-222 | CARBON RESISTOR | 2.2K 5% 1/6W | |
| | R2601 | QRD161J-151 | CARBON RESISTOR | 150 5% 1/6W | |
| | R2602 | QRD161J-124 | CARBON RESISTOR | 120K 5% 1/6W | |
| | R2603 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R2604 | QRD167J-562 | CARBON RESISTOR | 5.6K 5% 1/6W | |
| | R2605 | QRD161J-182 | CARBON RESISTOR | 1.8K 5% 1/6W | |
| | R8101 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8102 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8103 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R8104 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8151 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8152 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8153 | QRD161J-101 | CARBON RESISTOR | 100 5% 1/6W | |
| | R8301 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8302 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8303 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8304 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8305 | QRD161J-362 | CARBON RESISTOR | 3.6K 5% 1/6W | |
| | R8306 | QRD161J-433 | CARBON RESISTOR | 43K 5% 1/6W | |
| | R8307 | QRD161J-273 | CARBON RESISTOR | 27K 5% 1/6W | |
| | R8308 | QRD161J-823 | CARBON RESISTOR | 82K 5% 1/6W | |
| | R8309 | QRD161J-243 | CARBON RESISTOR | 24K 5% 1/6W | |
| | R8310 | QRD161J-183 | CARBON RESISTOR | 18K 5% 1/6W | |
| | R8321 | QRD161J-363 | CARBON RESISTOR | 36K 5% 1/6W | |
| | R8322 | QRD161J-753 | CARBON RESISTOR | 75K 5% 1/6W | |
| | R8323 | QRD161J-513 | CARBON RESISTOR | 51K 5% 1/6W | |
| | R8324 | QRD161J-114 | CARBON RESISTOR | 110K 5% 1/6W | |
| | R8325 | QRD161J-303Y | CARBON RESISTOR | 30K 5% 1/6W | |
| | R8326 | QRD161J-623 | CARBON RESISTOR | 62K 5% 1/6W | |
| | R8327 | QRD161J-433 | CARBON RESISTOR | 43K 5% 1/6W | |
| | R8328 | QRD161J-913 | CARBON RESISTOR | 91K 5% 1/6W | |
| | R8329 | QRD161J-471 | CARBON RESISTOR | 470 5% 1/6W | |
| | R8331 | QRD161J-224 | CARBON RESISTOR | 220K 5% 1/6W | |
| | R8332 | QRD161J-363 | CARBON RESISTOR | 36K 5% 1/6W | |
| | R8333 | QRD161J-273 | CARBON RESISTOR | 27K 5% 1/6W | |
| | R8334 | QRD161J-104 | CARBON RESISTOR | 100K 5% 1/6W | |
| | R8335 | QRD161J-753 | CARBON RESISTOR | 75K 5% 1/6W | |
| | R8341 | QRD161J-224 | CARBON RESISTOR | 220K 5% 1/6W | |
| | R8342 | QRD161J-363 | CARBON RESISTOR | 36K 5% 1/6W | |

BLOCK NO. 01

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | R8343 | QRD161J-303Y | CARBON RESISTOR | 30K 5% 1/6W | |
| | R8344 | QRD161J-623 | CARBON RESISTOR | 62K 5% 1/6W | |
| | R8345 | QRD161J-563 | CARBON RESISTOR | 56K 5% 1/6W | |
| | R8346 | QRD161J-303Y | CARBON RESISTOR | 30K 5% 1/6W | |
| | R8351 | QRD161J-104 | CARBON RESISTOR | 100K 5% 1/6W | |
| | R8352 | QRD161J-333 | CARBON RESISTOR | 33K 5% 1/6W | |
| | R8353 | QRD161J-333 | CARBON RESISTOR | 33K 5% 1/6W | |
| | R8354 | QRD161J-273 | CARBON RESISTOR | 27K 5% 1/6W | |
| | R8355 | QRD161J-393 | CARBON RESISTOR | 39K 5% 1/6W | |
| | R8356 | QRD161J-203 | CARBON RESISTOR | 20K 5% 1/6W | |
| | R8361 | QRD161J-823 | CARBON RESISTOR | 82K 5% 1/6W | |
| | R8362 | QRD161J-563 | CARBON RESISTOR | 56K 5% 1/6W | |
| | R8363 | QRD161J-393 | CARBON RESISTOR | 39K 5% 1/6W | |
| | R8364 | QRD161J-683 | CARBON RESISTOR | 68K 5% 1/6W | |
| | R8365 | QRD161J-823 | CARBON RESISTOR | 82K 5% 1/6W | |
| | R8371 | QRD161J-823 | CARBON RESISTOR | 82K 5% 1/6W | |
| | R8372 | QRD161J-563 | CARBON RESISTOR | 56K 5% 1/6W | |
| | R8373 | QRD161J-473 | CARBON RESISTOR | 47K 5% 1/6W | |
| | R8374 | QRD161J-473 | CARBON RESISTOR | 47K 5% 1/6W | |
| | R8375 | QRD161J-563 | CARBON RESISTOR | 56K 5% 1/6W | |
| | R8376 | QRD161J-473 | CARBON RESISTOR | 47K 5% 1/6W | |
| | R8381 | QRD161J-224 | CARBON RESISTOR | 220K 5% 1/6W | |
| | R8382 | QRD161J-623 | CARBON RESISTOR | 62K 5% 1/6W | |
| | R8383 | QRD161J-433 | CARBON RESISTOR | 43K 5% 1/6W | |
| | R8384 | QRD161J-273 | CARBON RESISTOR | 27K 5% 1/6W | |
| | R8385 | QRD161J-433 | CARBON RESISTOR | 43K 5% 1/6W | |
| | R8386 | QRD161J-273 | CARBON RESISTOR | 27K 5% 1/6W | |
| | R8481 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| ⚠ | R8482 | QRD14CJ-4R7SX | CARBON RESISTOR | 4.7 5% 1/4W | C,J |
| ⚠ | R8482 | QRZ0077-100X | FUSI.RESISTOR | 10 5% 1/4W | G,U,UT |
| ⚠ | R8482 | QRZ0077-100X | FUSI.RESISTOR | 10 5% 1/4W | B,E,EN |
| | R8483 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R8484 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R8485 | QRD161J-471 | CARBON RESISTOR | 470 5% 1/6W | |
| | R8486 | QRD167J-332 | CARBON RESISTOR | 3.3K 5% 1/6W | |
| | R8491 | QRD14CJ-6R8SX | CARBON RESISTOR | 6.8 5% 1/4W | |
| | R8492 | QRD161J-823 | CARBON RESISTOR | 82K 5% 1/6W | |
| | R8493 | QRD161J-823 | CARBON RESISTOR | 82K 5% 1/6W | |
| | R8503 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8504 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8505 | QRD161J-101 | CARBON RESISTOR | 100 5% 1/6W | |
| | R8511 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R8512 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8513 | QRD167J-332 | CARBON RESISTOR | 3.3K 5% 1/6W | |
| | R8521 | QRD161J-104 | CARBON RESISTOR | 100K 5% 1/6W | |
| | R8522 | QRD161J-123 | CARBON RESISTOR | 12K 5% 1/6W | |
| | R8523 | QRD161J-123 | CARBON RESISTOR | 12K 5% 1/6W | |
| | R8524 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8525 | QRD161J-121 | CARBON RESISTOR | 120 5% 1/6W | |
| | R8526 | QRD161J-180 | CARBON RESISTOR | 18 5% 1/6W | |
| | R8527 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8528 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8529 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R8530 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R8701 | QRD161J-101 | CARBON RESISTOR | 100 5% 1/6W | |

BLOCK NO. 01

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | R8702 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8703 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8704 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R8705 | QRD161J-183 | CARBON RESISTOR | 18K 5% 1/6W | |
| | R8706 | QRD161J-101 | CARBON RESISTOR | 100 5% 1/6W | |
| | R8707 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8708 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R8709 | QRD161J-151 | CARBON RESISTOR | 150 5% 1/6W | |
| | R8710 | QRD161J-151 | CARBON RESISTOR | 150 5% 1/6W | |
| | R8801 | QRD161J-683 | CARBON RESISTOR | 68K 5% 1/6W | |
| | R8802 | QRD161J-683 | CARBON RESISTOR | 68K 5% 1/6W | |
| | R8804 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R8806 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8807 | QRD161J-224 | CARBON RESISTOR | 220K 5% 1/6W | |
| | R8901 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8902 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8903 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8904 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8905 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8906 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8907 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R8908 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | VA831 | MA27T-B | DIODE | | |
| | VR111 | QVPA601-104A | V.RESISTOR | | |
| | VR116 | QVPA601-104A | V.RESISTOR | | |
| | VR211 | QVPA601-104A | V.RESISTOR | | |
| | VR216 | QVPA601-104A | V.RESISTOR | | |
| | Z 702 | VMA4633-001 | SHIELD | | |
| | Z 831 | VYH7237-003 | IC HOLDER | | |
| ⚠ | Z 901 | VMZ0087-001Z | FUSE CLIP | FOR F901,F902 | B,E,EN |
| ⚠ | Z 902 | VMZ0087-001Z | FUSE CLIP | FOR F901,F902 | |
| ⚠ | Z 903 | VMZ0087-001Z | FUSE CLIP | FOR F901,F902 | G,U,UT |
| ⚠ | Z 904 | VMZ0087-001Z | FUSE CLIP | FOR F901,F902 | |

## ■ Power supply board and Power switch board (B/E/EN/G only)

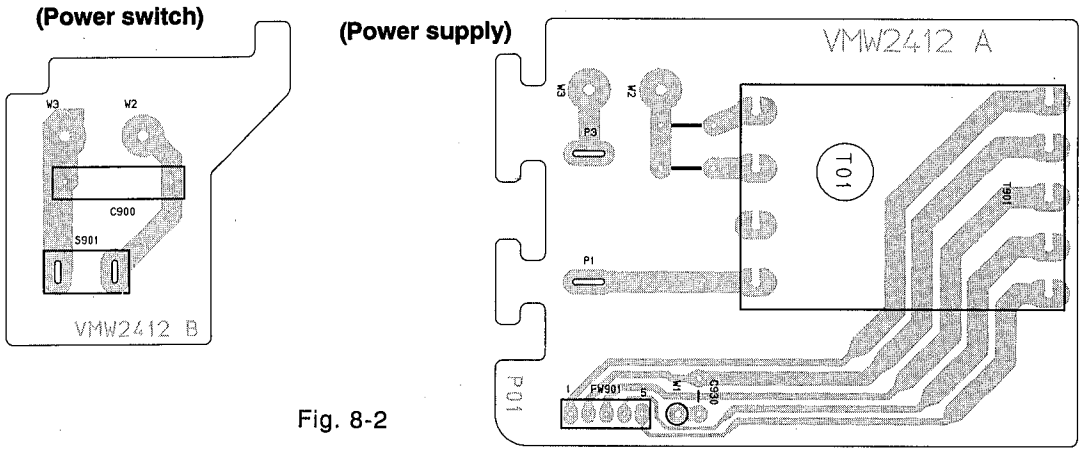



Fig. 8-2

## ● Power supply board and Power switch board Parts List (B/E/EN/G only)

BLOCK NO. 03

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| ⚠ | C 900 | QFZ9037-103 | M.CAPACITOR | .010MF | B,E,EN,G |
| | C 930 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | B,E,EN,G |
| ⚠ | P 1 | VMZ0034-001 | TAB | FOR POWER CORD | B,E,EN,G |
| ⚠ | P 3 | VMZ0034-001 | TAB | FOR POWER CORD | B,E,EN,G |
| ⚠ | S 901 | QSP1106-004 | PUSH SWITCH | | B,E,EN,G |

## ■ Power Supply Board (U/UT only)

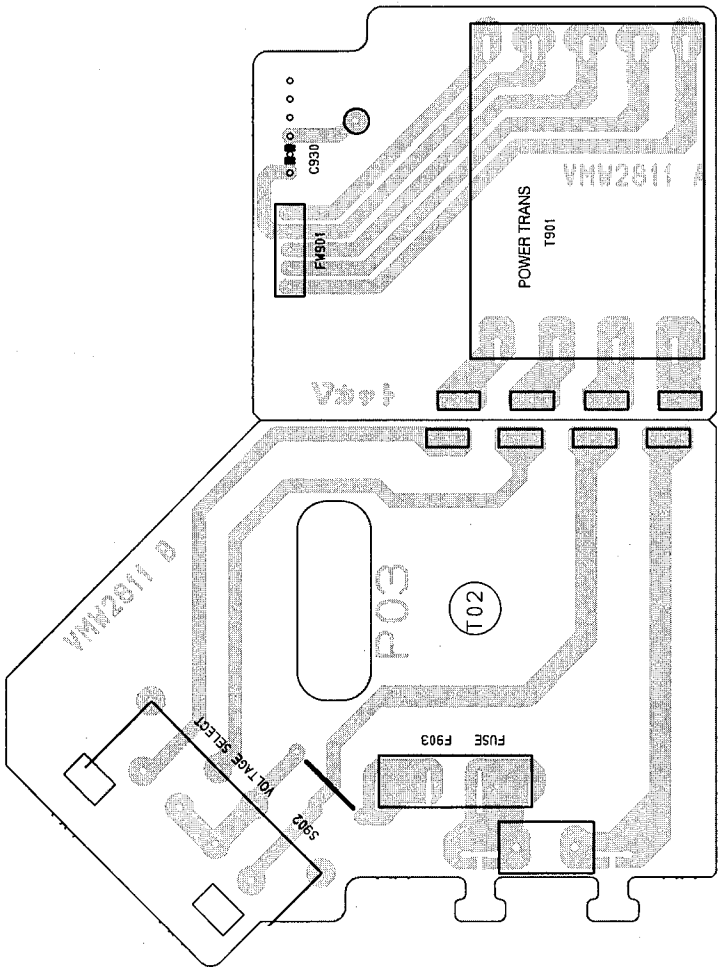



Fig. 8-3

## ● Power supply Board Parts List (U/UT only)

BLOCK NO. 03

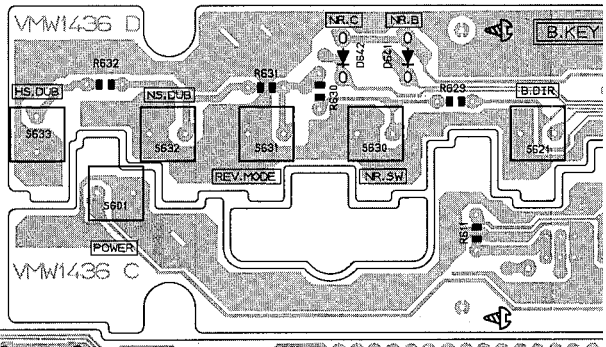
| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | C 930 | QCF11HP-103 | C.CAPACITOR | .010MF +100:-0% | U,UT |
| ⚠ | CN905 | VMC0221-003 | CONNECTOR | | U,UT |
| ⚠ | CN906 | VMC0221-003 | CONNECTOR | | U,UT |
| ⚠ | CN907 | VMC0221-003 | CONNECTOR | | U,UT |
| ⚠ | CN908 | VMC0221-003 | CONNECTOR | | U,UT |
| ⚠ | S 902 | QSS2325-112 | SLIDE SWITCH | | U,UT |
| ⚠ | TAB | VMZ0034-002 | TAB | FOR POWER CORD | U,UT |
| ⚠ | TAB | VMZ0034-002 | TAB | FOR POWER CORD | U,UT |
| ⚠ | Z 905 | VMZ0043-001S | FUSE CLAMP | FOR F903 | U,UT |
| ⚠ | Z 905 | VMZ0043-001S | FUSE CLAMP | FOR F903 | U,UT |
| ⚠ | Z 906 | VMZ0043-001S | FUSE CLAMP | FOR F903 | U,UT |
| ⚠ | Z 906 | VMZ0043-001S | FUSE CLAMP | FOR F903 | U,UT |

1 2 3 4 5

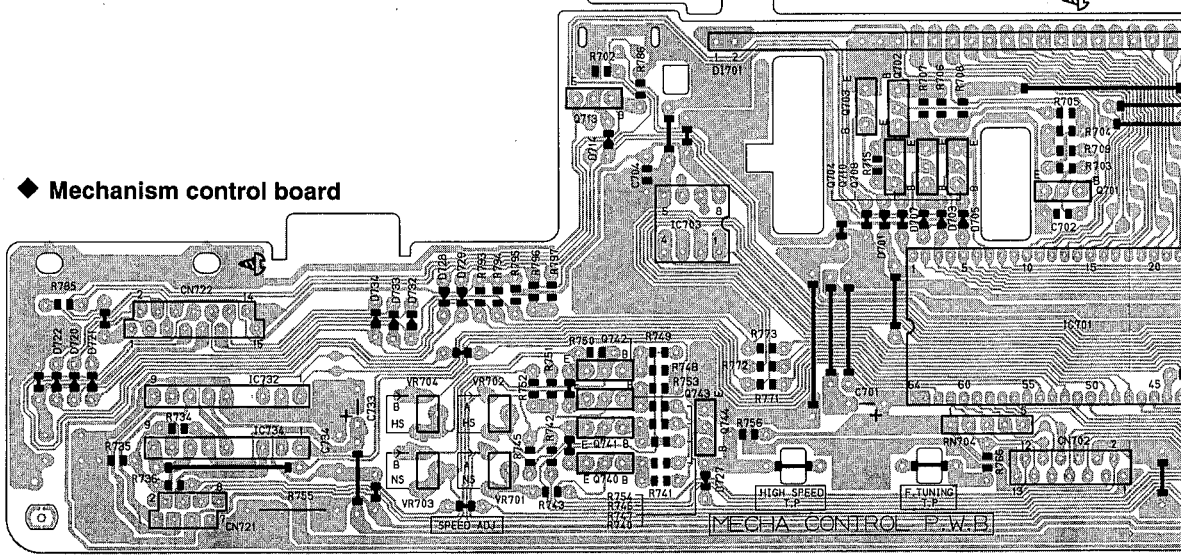
A B C D E F G

## ■ Sub Board

◆ Key switch board for deck B




◆ Mechanism control board



| 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|

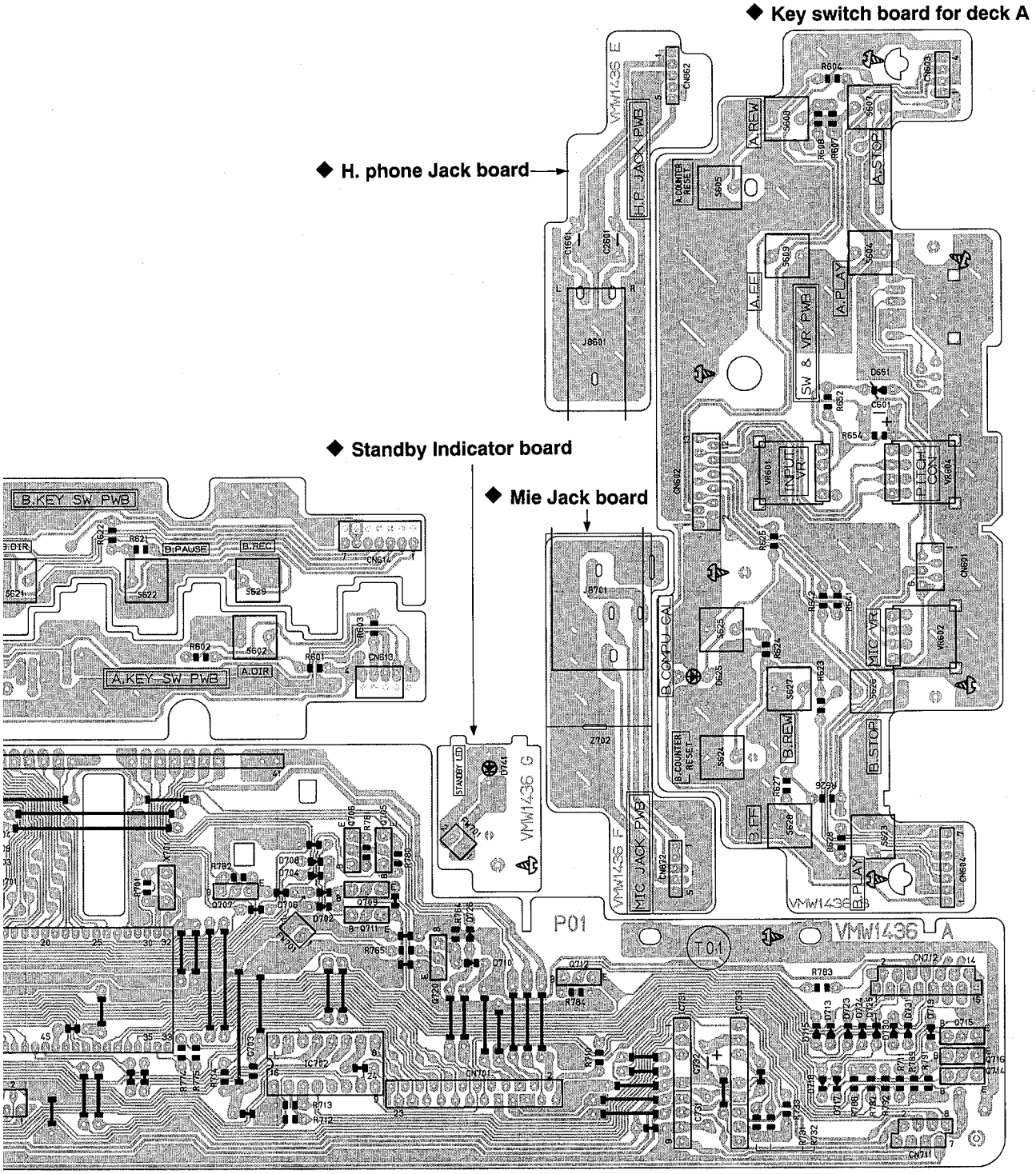



Fig. 8-4

## ● Sub Board Parts List

BLOCK NO. 02

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | C 601 | QETC1HM-104ZN | E.CAPACITOR | .10MF 20% 50V | |
| | C 701 | QET41AM-477 | E.CAPACITOR | 470MF 20% 10V | |
| | C 702 | QCBB1HK-471Y | C.CAPACITOR | 470PF 10% 50V | |
| | C 703 | QCVB1CM-103Y | C.CAPACITOR | .010MF 20% 16V | |
| | C 704 | QCVB1CM-103Y | C.CAPACITOR | .010MF 20% 16V | |
| | C 732 | QEK41EM-106 | E CAPACITOR | 10MF 20% 25V | |
| | C 733 | QET41EM-106 | E.CAPACITOR | 10MF 20% 25V | |
| | CN601 | VMC0163-R06 | CONNECTOR | | |
| | CN602 | VMC0163-R13 | CONNECTOR | | |
| | CN603 | VMC0280-004 | CONNECTOR | | |
| | CN604 | VMC0280-007 | CONNECTOR | | |
| | CN613 | VMC0281-S04 | CONNECTOR | | |
| | CN614 | VMC0281-S07 | CONNECTOR | | |
| | CN701 | VMC0163-R24 | CONNECTOR | | |
| | CN702 | VMC0163-R13 | CONNECTOR | | |
| | CN711 | VMC0234-P08 | CONNECTOR | | |
| | CN712 | VMC0234-P15 | CONNECTOR | | |
| | CN721 | VMC0234-P08 | CONNECTOR | | |
| | CN722 | VMC0234-P15 | CONNECTOR | | |
| | D 625 | SLZ-981C09-T6 | LED | | |
| | D 641 | SLR-325MCT31 | LED | | |
| | D 642 | SLR-325DCT31 | LED | | |
| | D 651 | MTZ3.6JB | ZENER DIODE | | |
| | D 701 | 1SS133 | SI DIODE | | |
| | D 702 | 1SS133 | SI DIODE | | |
| | D 703 | 1SS133 | SI DIODE | | |
| | D 704 | 1SS133 | SI DIODE | | |
| | D 705 | 1SS133 | SI DIODE | | |
| | D 706 | 1SS133 | SI DIODE | | |
| | D 707 | 1SS133 | SI DIODE | | |
| | D 708 | 1SS133 | SI DIODE | | |
| | D 710 | 1SS133 | SI DIODE | | |
| | D 713 | 1SS133 | SI DIODE | | |
| | D 714 | 1SS133 | SI DIODE | | |
| | D 715 | 1SS133 | SI DIODE | | |
| | D 717 | 1SS133 | SI DIODE | | |
| | D 718 | 1SS133 | SI DIODE | | |
| | D 719 | 1SS133 | SI DIODE | | |
| | D 720 | 1SS133 | SI DIODE | | |
| | D 721 | 1SS133 | SI DIODE | | |
| | D 722 | 1SS133 | SI DIODE | | |
| | D 723 | 1SS133 | SI DIODE | | |
| | D 724 | 1SS133 | SI DIODE | | |
| | D 725 | 1SS133 | SI DIODE | | |
| | D 726 | 1SS133 | SI DIODE | | |
| | D 727 | 1SS133 | SI DIODE | | |
| | D 728 | 1SS133 | SI DIODE | | |
| | D 729 | 1SS133 | SI DIODE | | |
| | D 730 | 1SS133 | SI DIODE | | |
| | D 731 | 1SS133 | SI DIODE | | |
| | D 732 | 1SS133 | SI DIODE | | |
| | D 733 | 1SS133 | SI DIODE | | |
| | D 734 | 1SS133 | SI DIODE | | |
| | D 741 | SLR-56VCTB7 | LED | | |
| | DI701 | QLF0024-001 | FL TUBE | | |

BLOCK NO. 02

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | IC701 | MB89145V2P-121 | IC | | |
| | IC702 | M50253P | IC | | |
| | IC703 | BR93LC46 | IC | | |
| | IC731 | BA6218 | IC | | |
| | IC732 | BA6218 | IC | | |
| | IC733 | TA8409S | IC | | |
| | IC734 | TA8409S | IC | | |
| | Q 701 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q 702 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q 703 | DTA124ES | TRANSISTOR | | |
| | Q 704 | DTC124ES | TRANSISTOR | | |
| | Q 705 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q 706 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q 707 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q 708 | DTC124ES | TRANSISTOR | | |
| | Q 709 | DTC124ES | TRANSISTOR | | |
| | Q 710 | DTC124ES | TRANSISTOR | | |
| | Q 711 | DTC124ES | TRANSISTOR | | |
| | Q 712 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q 713 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q 714 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q 715 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q 716 | 2SC1740S(R,S) | TRANSISTOR | | |
| | Q 720 | DTC114ESA-T | TRANSISTOR | | |
| | Q 740 | 2SA1175 | TRANSISTOR | | |
| | Q 741 | 2SA1175 | TRANSISTOR | | |
| | Q 742 | 2SA1175 | TRANSISTOR | | |
| | Q 743 | 2SA1175 | TRANSISTOR | | |
| | Q 744 | DTC124ES | TRANSISTOR | | |
| | R 601 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R 602 | QRD161J-122 | CARBON RESISTOR | 1.2K 5% 1/6W | |
| | R 603 | QRD161J-182 | CARBON RESISTOR | 1.8K 5% 1/6W | |
| | R 604 | QRD161J-272 | CARBON RESISTOR | 2.7K 5% 1/6W | |
| | R 607 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R 608 | QRD161J-122 | CARBON RESISTOR | 1.2K 5% 1/6W | |
| | R 621 | QRD161J-222 | CARBON RESISTOR | 2.2K 5% 1/6W | |
| | R 622 | QRD161J-182 | CARBON RESISTOR | 1.8K 5% 1/6W | |
| | R 623 | QRD161J-272 | CARBON RESISTOR | 2.7K 5% 1/6W | |
| | R 624 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R 625 | QRD161J-271 | CARBON RESISTOR | 270 5% 1/6W | |
| | R 626 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R 627 | QRD161J-122 | CARBON RESISTOR | 1.2K 5% 1/6W | |
| | R 628 | QRD161J-182 | CARBON RESISTOR | 1.8K 5% 1/6W | |
| | R 629 | QRD161J-272 | CARBON RESISTOR | 2.7K 5% 1/6W | |
| | R 630 | QRD161J-472 | CARBON RESISTOR | 4.7K 5% 1/6W | |
| | R 631 | QRD161J-822 | CARBON RESISTOR | 8.2K 5% 1/6W | |
| | R 632 | QRD161J-273 | CARBON RESISTOR | 27K 5% 1/6W | |
| | R 641 | QRD161J-271 | CARBON RESISTOR | 270 5% 1/6W | |
| | R 642 | QRD161J-271 | CARBON RESISTOR | 270 5% 1/6W | |
| | R 652 | QRD161J-331 | CARBON RESISTOE | 330 5% 1/6W | |
| | R 654 | QRD161J-105 | CARBON RESISTOR | 1.0M 5% 1/6W | |
| | R 701 | QRD161J-153 | CARBON RESISTOR | 15K 5% 1/6W | |
| | R 702 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 703 | QRD161J-471 | CARBON RESISTOR | 470 5% 1/6W | |
| | R 704 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |

BLOCK NO. 02

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | R 705 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R 706 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R 707 | QRD161J-471 | CARBON RESISTOR | 470 5% 1/6W | |
| | R 708 | QRD161J-272 | CARBON RESISTOR | 2.7K 5% 1/6W | |
| | R 709 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 710 | QRD161J-221 | CARBON RESISTOR | 220 5% 1/6W | |
| | R 711 | QRD161J-473 | CARBON RESISTOR | 47K 5% 1/6W | |
| | R 712 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 713 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 714 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 715 | QRD161J-102 | CARBON RESISTOR | 1.0K 5% 1/6W | |
| | R 731 | QRD167J-332 | CARBON RESISTOR | 3.3K 5% 1/6W | |
| | R 732 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 733 | QRD161J-182 | CARBON RESISTOR | 1.8K 5% 1/6W | |
| | R 734 | QRD167J-332 | CARBON RESISTOR | 3.3K 5% 1/6W | |
| | R 735 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 736 | QRD161J-182 | CARBON RESISTOR | 1.8K 5% 1/6W | |
| | R 740 | QRD161J-224 | CARBON RESISTOR | 220K 5% 1/6W | |
| | R 741 | QRD161J-184 | CARBON RESISTOR | 180K 5% 1/6W | |
| | R 742 | QRD161J-123 | CARBON RESISTOR | 12K 5% 1/6W | |
| | R 743 | QRD161J-752 | CARBON RESISTOR | 7.5K 5% 1/6W | |
| | R 745 | QRD161J-683 | CARBON RESISTOR | 68K 5% 1/6W | |
| | R 746 | QRD161J-224 | CARBON RESISTOR | 220K 5% 1/6W | |
| | R 747 | QRD161J-184 | CARBON RESISTOR | 180K 5% 1/6W | |
| | R 748 | QRD161J-224 | CARBON RESISTOR | 220K 5% 1/6W | |
| | R 749 | QRD161J-184 | CARBON RESISTOR | 180K 5% 1/6W | |
| | R 750 | QRD161J-683 | CARBON RESISTOR | 68K 5% 1/6W | |
| | R 751 | QRD161J-153 | CARBON RESISTOR | 15K 5% 1/6W | |
| | R 752 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 753 | QRD161J-224 | CARBON RESISTOR | 220K 5% 1/6W | |
| | R 754 | QRD161J-184 | CARBON RESISTOR | 180K 5% 1/6W | |
| ⚠ | R 755 | QRH144J-4R7 | FUSI.RESISTOR | 4.7 5% 1/4W | G,U,UT |
| ⚠ | R 755 | QRH144J-4R7 | FUSI.RESISTOR | 4.7 5% 1/4W | B,E,EN |
| ⚠ | R 755 | QRD14CJ-4R7SX | CARBON RESISTOR | 4.7 5% 1/4W | C,J |
| | R 756 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 764 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 765 | QRD161J-151 | CARBON RESISTOR | 150 5% 1/6W | |
| | R 766 | QRD161J-473 | CARBON RESISTOR | 47K 5% 1/6W | |
| | R 771 | QRD161J-101 | CARBON RESISTOR | 100 5% 1/6W | |
| | R 772 | QRD161J-101 | CARBON RESISTOR | 100 5% 1/6W | |
| | R 773 | QRD161J-101 | CARBON RESISTOR | 100 5% 1/6W | |
| | R 774 | QRD161J-101 | CARBON RESISTOR | 100 5% 1/6W | |
| | R 775 | QRD161J-101 | CARBON RESISTOR | 100 5% 1/6W | |
| | R 780 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R 781 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R 782 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R 783 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R 784 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R 785 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R 786 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R 787 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R 788 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R 789 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |
| | R 791 | QRD161J-104 | CARBON RESISTOR | 100K 5% 1/6W | |
| | R 792 | QRD161J-223 | CARBON RESISTOR | 22K 5% 1/6W | |

BLOCK NO. 02

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | SUFFIX |
|---|---|---|---|---|---|
| | R 793 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 794 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 795 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 796 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | R 797 | QRD161J-103 | CARBON RESISTOR | 10K 5% 1/6W | |
| | RN704 | QRB045J-682 | R.NETWORK | 6.8K 5% 1/4W | |
| | S 601 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 602 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 604 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 605 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 607 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 608 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 609 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 621 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 622 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 623 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 624 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 625 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 626 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 627 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 628 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 629 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 630 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 631 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 632 | QSQ4H11-V12Z | TACT SWITCH | | |
| | S 633 | QSQ4H11-V12Z | TACT SWITCH | | |
| | VR601 | QVGA12Z-V05 | V RESISTOR | | |
| | VR602 | QVGA16A-V02 | V.RESISTOR | | |
| | VR604 | QVAA16B-V01 | V.RESISTOR | | |
| | VR701 | QVPE612-103ZM | SEMI.V.RESISTOR | | |
| | VR702 | QVPE612-203ZM | SEMI.V.RESISTOR | | |
| | VR703 | QVPE612-103ZM | SEMI.V.RESISTOR | | |
| | VR704 | QVPE612-203ZM | SEMI.V.RESISTOR | | |
| | X 701 | EFO-EC8004T4 | CERAMIC RESONAT | | |
| | Z 701 | VYH3844-003 | FL HOLDER | | |

# 9 Exploded View of Enclosure Component Parts and Part

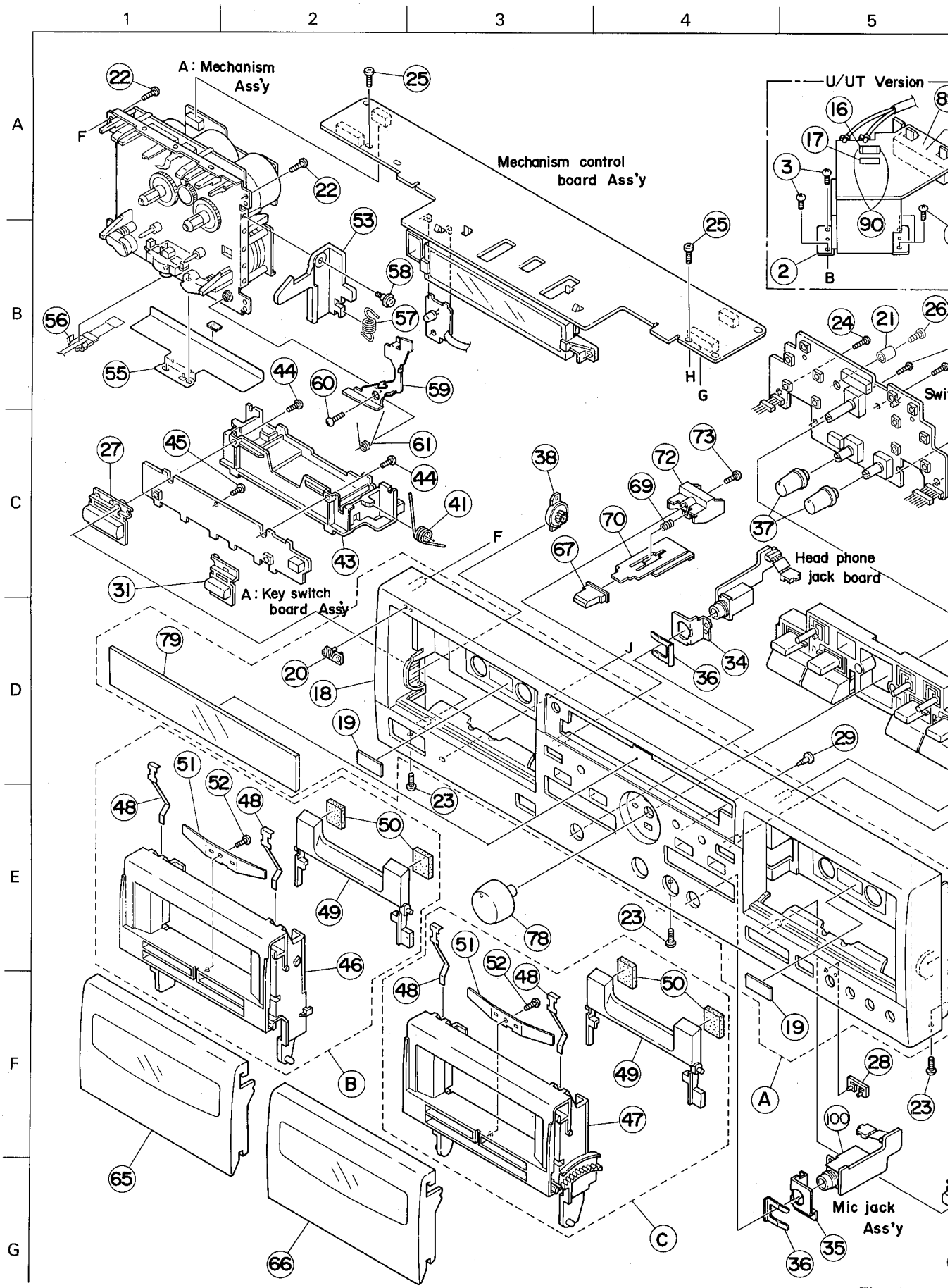
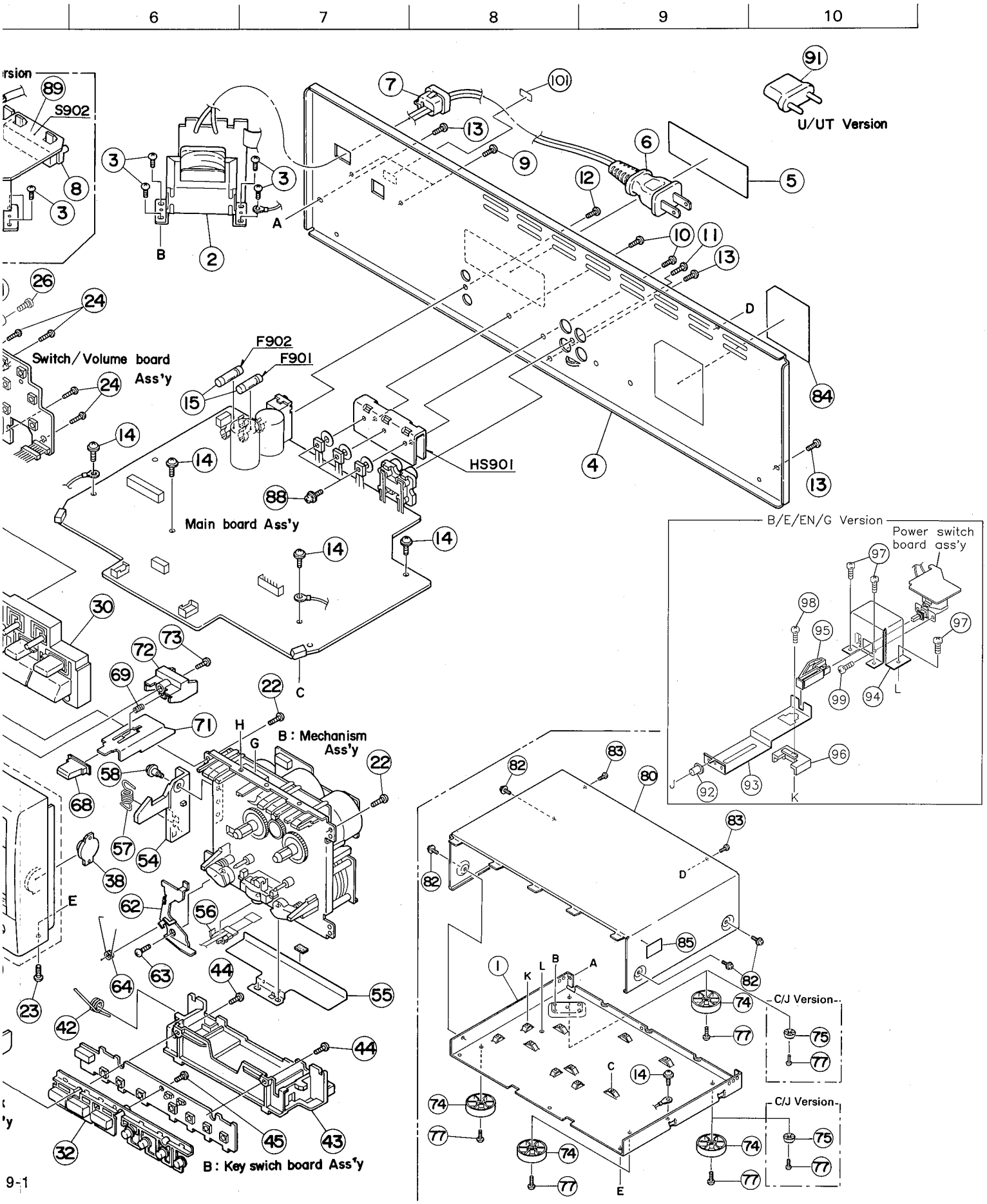



Fig. 9-1

# Parts List


6
7
8
9
10
S902
U/UT Version
F902
F901
Switch/ Volume board Ass'y
HS901
Main board Ass'y
B/E/EN/G Version
Power switch board ass'y
B : Mechanism Ass'y
B : Key swich board Ass'y
C/J Version
C/J Version

## ● Enclosure Component Parts List

BLOCK NO. M1MM

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | QTY | SUFFIX | CLR |
|---|---|---|---|---|---|---|---|
| | A | ZCTDW345J-FB | FRONT PANEL ASS | NO.18-20,79 | 1 | C,J | |
| | | ZCTDW345K-FB | FRONT PANEL ASS | NO.18-20,79 | 1 | B,E,EN,G | |
| | | ZCTDW345U-FB | FRONT PANEL ASS | NO.18-20,79 | 1 | U,UT | |
| | B | ZCTDW317K-CH-A | CASSETTE HOLDER | NO.46,48-52 | 1 | | |
| | C | ZCTDW317K-CH-B | CASSETTE HOLDER | NO.47-52 | 1 | | |
| | 1 | VKL1333-013 | CHASSIS BASE | | 1 | | |
| ⚠ | 2 | VTP52Z5-011F | POWER TRANS. | | 1 | B,E,EN,G | |
| ⚠ | | VTP52G5-011F | POWER TRANS. | | 1 | U,UT | |
| ⚠ | | VTP52A5-011F | POWER TRANS. | | 1 | C,J | |
| | 3 | SBST3006Z | SCREW | FOR POWER TRANS | 4 | | |
| | 4 | VJC2579-001 | REAR PANEL | | 1 | B,C,E,EN,G,J | |
| | | VJC2579-002 | REAR PANEL | | 1 | U,UT | |
| | 5 | VND4999-001 | FCC LABEL (3) | | 1 | C,J | |
| ⚠ | 6 | QMP1340-200 | POWER CORD | | 1 | C,J | |
| ⚠ | | QMP3900-200 | POWER CORD | | 1 | E,EN,G | |
| ⚠ | | QMP5530-008BS | POWER CORD | | 1 | B | |
| ⚠ | | QMP7380-200 | POWER CORD | | 1 | U,UT | |
| | 7 | QHS3771-108 | CORD STOPPER | | 1 | | |
| | 8 | VKS5011-001 | VOLTAGE CONTACT | | 1 | U,UT | |
| | 9 | SBSF3008M | SCREW | FOR V.SELECTOR | 2 | U,UT | |
| | 10 | SBSF3008M | SCREW | FOR HEAT SINK | 2 | | |
| | 11 | SBSF3008M | SCREW | FOR PIN JACK | 1 | | |
| | 12 | SBSF3008M | SCREW | FOR DCS JACK | 1 | | |
| | 13 | SBST3006M | SCREW | FOR REAR+CHASSI | 3 | | |
| | 14 | GBST3006Z | SCREW | FOR MAIN P.C.BO | 5 | | |
| ⚠ | 15 | QMF51A2-R80 | FUSE | FOR F901,F902 | 2 | E,EN,G,U,UT | |
| ⚠ | | QMF51E2-R80J1 | FUSE | FOR F901,F902 | 2 | B | |
| ⚠ | 16 | QMF51A2-R315 | FUSE | FOR F903 | 1 | U,UT | |
| | 17 | VND4003-074 | FUSE LABEL | FOR F903 | 1 | U,UT | |
| | 18 | VJG1458-001 | FRONT PANEL | | 1 | B,E,EN,G | |
| | | VJG1458-002UL | FRONT PANEL | | 1 | C,J | |
| | | VJG1458-003 | FRONT PANEL | | 1 | U,UT | |
| | 19 | VJD4024-002 | REFLECTION PLATE | | 2 | | |
| | 20 | VJD5429-001SS | JVC MARK | | 1 | | |
| | 21 | VYH7979-001MM | CAP | | 1 | | |
| | 22 | SBSF3010Z | SCREW | FOR MECHANISM | 4 | | |
| | 23 | SBST3006M | SCREW | FOR FRONT PANEL | 3 | | |
| | 24 | SBSF2610Z | SCREW | FOR SLIDE PCB | 5 | | |
| | 25 | SDST2604Z | SCREW | FOR FL.PWB+MECH | 2 | | |
| | 26 | SBSF2610Z | SCREW | | 1 | | |
| | 27 | VXP5345-002 | PUSH BUTTON | | 1 | B,E,EN,G | |
| | | VXP5345-001 | PUSH BUTTON | | 1 | C,J,U,UT | |
| | 28 | VJK4436-001 | LENS | | 1 | | |
| | 29 | VJK4437-001 | LENS | | 1 | | |
| | 30 | VXP2131-001 | MECHA BUTTON | AB PLAY/STOP | 1 | | |
| | 31 | VXP5350-001 | MECHA BUTTON | A DELECTION | 1 | | |
| | 32 | VXP3835-001 | MECHA BUTTON | B REC/PAUSE/DOL | 1 | | |
| | 34 | VKL7856-001 | HEAD PHONE BKT | FOR H.P.JACK | 1 | | |
| | 35 | VKL7855-001 | MIC BRACKET | FOR MIC.JACK | 1 | | |
| | 36 | VKL6752-001 | SNAP PLATE | | 2 | | |
| | 37 | VXL4424-002 | KNOB | BALANC/H.PHONE/ | 2 | | |
| | 38 | VYH7779-00B | DUMPER ASS'Y | | 2 | | |
| | 41 | VKW3006-236 | TORSION SPRING | A-HOLDER | 1 | | |
| | 42 | VKW3006-237 | TORSION SPRING | B-HOLDER | 1 | | |
| | 43 | VYH2323-001 | MECHA HOLDER | FOR A B MECHA | 2 | | |

BLOCK NO. M1MM

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | QTY | SUFFIX | CLR |
|---|---|---|---|---|---|---|---|
| | 44 | SBSF2610Z | SCREW | FOR MECHANISM B | 4 | | |
| | 45 | SBSF2610Z | SCREW | FOR A B PWB | 2 | | |
| | 46 | VJT2317-007 | CASSETTE HOLDER | FOR A-MECHA | 1 | | |
| | 47 | VJT2317-008 | CASSETTE HOLDER | FOR B-MECHA | 1 | | |
| | 48 | VKY4180-001 | CASSETTE SPRING | | 4 | | |
| | 49 | VJD3867-002 | C. STABILIZER | | 2 | | |
| | 50 | VYTS491-001 | PAD | | 4 | | |
| | 51 | VKY4635-002 | SPRING PLATE | | 2 | | |
| | 52 | SBSF2608Z | SCREW | FOR S.PLATE | 2 | | |
| | 53 | VYH7941-005 | LOCK LEVER(L) | FOR A MECHA | 1 | | |
| | 54 | VYH7941-006 | LOCK LEVER(R) | FOR B MECHA | 1 | | |
| | 55 | VMA4718-001 | SHIELD | FOR MECHA | 2 | | |
| | 56 | VKS3655-002 | F.P.C. HOLDER | FOR HEAD WIRE | 2 | | |
| | 57 | VKW5199-001 | TENSION SPRING | | 2 | | |
| | 58 | VKZ4749-001 | SPECIAL SCREW | FOR LOCK L+MECH | 2 | | |
| | 59 | VKL7293-001 | EJECT SAFTY(R) | EGC | 1 | | |
| | 60 | SBSF3010Z | SCREW | FOR E.SAFTY(R) | 1 | | |
| | 61 | VKW5069-002 | TORSION SPRING | FOR E.SAFTY(R) | 1 | | |
| | 62 | VKL7663-001 | EJECT SAFTY(L) | EGC | 1 | | |
| | 63 | SBSF3010Z | SCREW | FOR E.SAFTY(L) | 1 | | |
| | 64 | VKW5104-003 | TORSION SPRING | FOR E.SAFTY(L) | 1 | | |
| | 65 | VJT2380-001 | CASSETTE LID | FOR A MECHA | 1 | | |
| | 66 | VJT2380-002 | CASSETTE LID | FOR B MECHA | 1 | | |
| | 67 | VXP5289-003 | PUSH BUTTON | EJECT | 1 | | |
| | 68 | VXP5289-004 | PUSH BUTTON | | 1 | | |
| | 69 | VKW3001-077 | C.SPRING | | 2 | | |
| | 70 | VKL7857-002 | REMOTE ARM | FOR A-MECHA | 1 | | |
| | 71 | VKL7858-002 | REMOTE ARM | FOR B-MECHA | 1 | | |
| | 72 | VYH7773-001 | BUTTON HOLDER | | 2 | | |
| | 73 | SBSF2610Z | SCREW | FOR B.H.+F.P. | 2 | | |
| | 74 | E406379-008SS | FOOT ASS'Y | | 4 | G,U,UT | |
| | | E406379-008SS | FOOT ASS'Y | | 4 | B,E,EN | |
| | | E406379-008SS | FOOT ASS'Y | | 2 | C,J | |
| | 75 | E47227-037 | FOOT ASS'Y | | 2 | C,J | |
| | 77 | SBST3008Z | SCREW | FOR FOOT | 4 | | |
| | 78 | VXL3025-002 | KNOB | INPUT VOLUME | 1 | | |
| | 79 | VJK3652-003 | FINDER | | 1 | | |
| | 80 | VJG1459-002S | TOP COVER | | 1 | | |
| | 82 | VKZ4614-001 | SPECIAL SCREW | | 4 | | |
| | 83 | SBST3006M | SCREW | FOR TOP COVER | 2 | | |
| | 84 | VYN2356-M005PA | NAME PLATE | | 1 | E,EN,G | |
| | | VYN2356-M002PA | NAME PLATE | | 1 | B | |
| | | VYN2356-M006PA | NAME PLATE | | 1 | C,J | |
| | | VYN2356-M007PA | NAME PLATE | | 1 | U,UT | |
| | 85 | VYN2356-010 | NAME PLATE | | 1 | UT | |
| | 88 | DPSP3008Z | SCREW | Q901,Q903,Q909 | 3 | | |
| ⚠ | 89 | QSS2325-112 | SLIDE SWITCH | S902 | 1 | U,UT | |
| ⚠ | 90 | VMZ0043-001S | FUSE CLAMP | FOR F903 | 2 | U,UT | |
| | 91 | V04062-001 | AC PLUG | | 1 | U,UT | |
| | 92 | VXP5346-001 | PUSH BUTTON | | 1 | B,E,EN,G | |
| | 93 | VKL7859-002 | REMOTE BRACKET | | 1 | B,E,EN,G | |
| | 94 | VYH8119-001 | SWITCH BRACKET | | 1 | B,E,EN,G | |
| | 95 | VKS5569-001 | REMOTE BAR | | 1 | B,E,EN,G | |
| | 96 | VKS5570-001 | SLIDER | | 1 | B,E,EN,G | |

BLOCK NO. M1MM

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | QTY | SUFFIX | CLR |
|---|---|---|---|---|---|---|---|
| | 97 | SBST3006Z | SCREW | | 3 | B,E,EN,G | |
| | 98 | SSST3008Z | SCREW | | 1 | B,E,EN,G | |
| | 99 | SDST3006Z | SCREW | | 1 | B,E,EN,G | |
| | 100 | VMA4633-001 | SHIELD PLATE | FOR MIC Z702 | 1 | | |
| | 101 | LE40210-001A | CAUTION LABEL | | 1 | UT | |
| ⚠ | HS901 | VMH4011-201 | HEAT SINK | | 1 | | |

# 10 Exploded View of Mechanism Component Parts

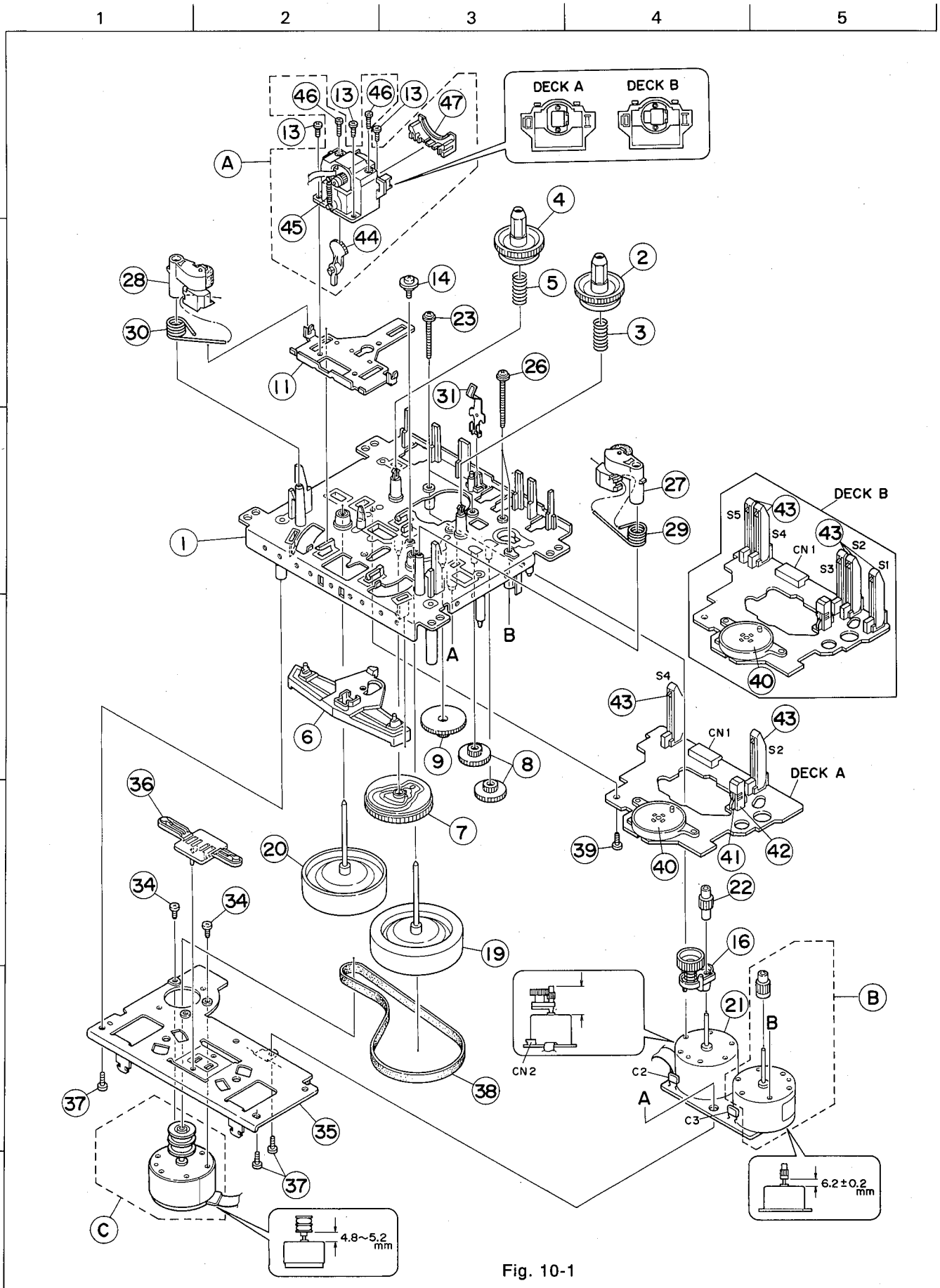



Fig. 10-1

## ● Mechanism Component Parts List

BLOCK NO. M2MM

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | QTY | SUFFIX | CLR |
|---|---|---|---|---|---|---|---|
| | A | VKS3626-00E | H.MOUNT ASS'Y | A MECHA | 1 | | |
| | | VKS3629-00E | H.MOUNT ASS'Y | B MECHA. | 1 | | |
| | B | MSN5D257A-SA1 | DC MOTOR ASS'Y | | 1 | | |
| | C | MSI5B2LW-SA2 | CAPSTAN MOTOR | | 1 | | |
| | 1 | VKS1126-00B | CHASSIS B ASS'Y | | 1 | | |
| | 2 | VKS5428-00B | T-UP REEL ASSY | | 1 | | |
| | 3 | VKW5043-001 | B.T. SPRING | | 1 | | |
| | 4 | VKS3617-002 | REEL | | 1 | | |
| | 5 | VKW5043-001 | B.T. SPRING | | 1 | | |
| | 6 | VKS3627-002 | PINCH LEVER | | 1 | | |
| | 7 | VKS2224-002 | CONTROL CAM | | 1 | | |
| | 8 | VKS5454-001 | ACT GEAR(2) | | 2 | | |
| | 9 | VKS5455-001 | ACT GEAR(3) | | 1 | | |
| | 11 | VKM3632-001 | HEAD BASE | | 1 | | |
| | 13 | SDSR2004Z | SCREW | | 3 | | |
| | 14 | VKZ4708-001 | SPECIAL SCREW | | 1 | | |
| | 16 | VKS5430-00CMM | FR ARM ASS'Y | | 1 | | |
| | 19 | VKF3195-00A | FLYWHEEL(R)ASSY | | 1 | | |
| | 20 | VKF3197-00A | FLYWHEEL(L)ASSY | | 1 | | |
| | 21 | MMN-6F4RA38 | D.C.MOTOR | FOR REEL/MOTOR | 1 | | |
| | 22 | VKS5432-001 | REEL MOT. GEAR | GEAR KIT S | 1 | | |
| | 23 | VKZ4705-001 | SCREW | | 2 | | |
| | 26 | VKZ4705-002 | SCREW | | 2 | | |
| | 27 | VKP4227-00B | PINCH R.(R) ASY | | 1 | | |
| | 28 | VKP4229-00B | PINCH R.(L) ASY | | 1 | | |
| | 29 | VKW5045-003 | P.R. SP.(R) | FOR PINCH (R) | 1 | | |
| | 30 | VKW5046-003 | P.R. SP.(L) | FOR PINCH (L) | 1 | | |
| | 31 | VKY4670-001 | CASSETTE SPRING | PRESS KIT S | 1 | | |
| | 34 | SPSP2603Z | SCREW | | 2 | | |
| | 35 | VKM3636-002 | FM. BRACKET | | 1 | | |
| | 36 | VKS5327-005MM | THRUST PLATE | | 1 | | |
| | 37 | SBSF2608Z | SCREW | | 3 | | |
| | 38 | VKB3001-068 | BELT | | 1 | | |
| | 39 | SDST2612Z | SCREW | | 1 | | |
| | 40 | VKS3616-00A | CAM SW UNIT | S6 | 1 | | |
| | 41 | DN6851-HI | HALL IC | | 1 | | |
| | 42 | VKS3630-001MM | IC HOLDER | IC1 | 1 | | |
| | 43 | MXS00220MVL0 | CASSETTE SWITCH | S1,S2,S3,S4,S5 | 5 | | |
| | | MXS00220MVL0 | CASSETTE SWITCH | A MECHA | 2 | | |
| | 44 | VKS3614-001 | TURN OVER GEAR | | 1 | | |
| | 45 | VKW5126-001 | HEAD SPRING | | 1 | | |
| | 46 | VKZ4730-001 | SPECIAL SCREW | | 2 | | |
| | 47 | VKS3654-001 | HEAD MT. COVER | | 1 | | |
| C | 2 | QFV41HJ-104ZM | TF CAPACITOR | C2,C3 | 2 | | |
| CN | 1 | VMC0234-R15 | CONNECTOR | CN1 | 1 | | |
| CN | 2 | VMC0234-R08 | CONNECTOR | CN2 | 1 | | |

# 11 Packing Illustration and packing parts list

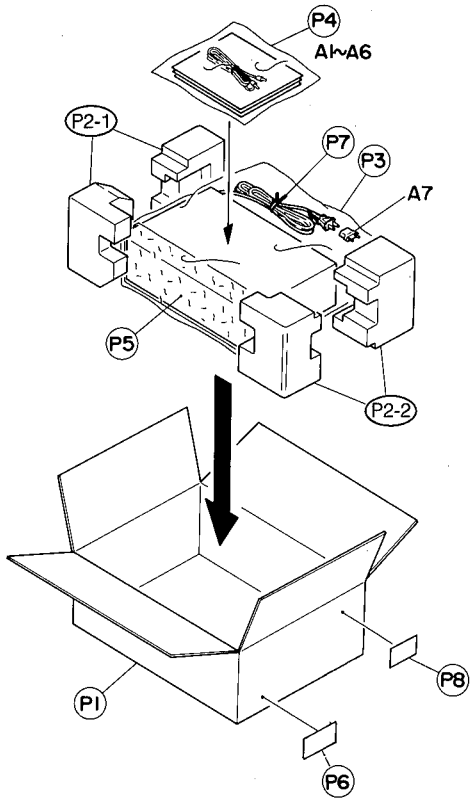



Fig. 11-1

## ● Packing Parts List

BLOCK NO. M3MM

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | QTY | SUFFIX | CLR |
|---|---|---|---|---|---|---|---|
| | P 1 | VPC2356-M002 | CARTON | | 1 | C,J | |
| | | VPC2356-M003 | CARTON | | 1 | B,E,EN,G,UT | |
| | P 2-1 | VPH2480-001 | CUSHION (L) | | 1 | | |
| | P 2-2 | VPH2480-002 | CUSHION (R) | | 1 | | |
| | P 3 | E300196-031B | ENVELOPE | | 1 | | |
| | P 4 | VPE3005-007 | POLY BAG | FOR INSTRUCTION | 1 | | |
| | P 5 | VPK3001-012 | SHEET | | 1 | | |
| | P 6 | VYN2356-010 | NAME PLATE | | 1 | UT | |
| | P 7 | Q04141H | WIRE CLAMP | FOR POWER CORD | 1 | | |
| | P 8 | ---------- | CARTON LABEL | FOR OVER SEA | 1 | | |

## ● Accessories

BLOCK NO. M3MM

| ⚠ | REF. | PARTS NO. | PARTS NAME | REMARKS | QTY | SUFFIX | CLR |
|---|---|---|---|---|---|---|---|
| | A 1 | VMP0039-00D | PIN CORD | | 1 | | |
| | A 2 | VNN2356-121M | INST BOOK | | 1 | U | |
| | | VNN2356-271M | INSTRUCTIONS | | 1 | EN | |
| | | VNN2356-661M | INSTRUCTIONS | | 1 | C,E,EN,G,U,UT | |
| | | VNN2356-671M | INSTRUCTIONS | | 1 | B,J | |
| | A 3 | BT-52002-1 | WARRANTY CARD | | 1 | C | |
| | | BT-54003-1 | WARRANTY CARD | | 1 | B | |
| | | BT-20047F | WARRANTY CARD | | 1 | J | |
| | | BT-20134 | WARRANTY CARD | | 1 | G | |
| | A 4 | BT-20137 | SERVICE NETWORK | | 1 | J | |
| | | BT-20066A | SERVICE NIT LIS | | 1 | B | |
| | | BT-20071B | SVC CENTER LIST | | 1 | C | |
| | A 5 | BT-20044G | SAFETY INST. | | 1 | C,J | |
| | | E43486-340A | SAFETY I.SHEET | | 1 | B | |
| | A 6 | EWP805-012 | REMOTE WIRE | | 1 | | |
| | A 7 | V04062-001 | CONTI.PLUG | | 1 | U,UT | |

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